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Baskar, P.
10/647057

FILE 'CAPLUS' ENTERED AT 15:43:47 ON 08 DEC 2005
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FILE COVERS 1907 - 8 Dec 2005 VOL 143 ISS 24
FILE LAST UPDATED: 7 Dec 2005 (20051207/ED)

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- key terms

L1 294 SEA FILE=CAPLUS ABB=ON PLU=ON (FUSOBACTER? OR F OR SPHAEROPH? OR S)(W)NECROPHOR?
L2 41 SEA FILE=CAPLUS ABB=ON PLU=ON L1 AND (MICE OR MOUSE OR RODENT OR RAT)
L3 5 SEA FILE=CAPLUS ABB=ON PLU=ON L2 AND (POLYPEPTIDE OR PEPTIDE OR PROTEIN OR POLYPROTEIN)

L3 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 23 Jul 2004
ACCESSION NUMBER: 2004:589685 CAPLUS
DOCUMENT NUMBER: 141:118285
TITLE: Use of sensor arrays containing hairpin probes for detecting nucleic acids of pathogens
INVENTOR(S): Miller, Benjamin L.; Krauss, Todd D.; Du, Hui; Crnkovich, Nicole; Strohsahl, Christopher M.
PATENT ASSIGNEE(S): University of Rochester, USA
SOURCE: PCT Int. Appl., 73 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004061127	A2	20040722	WO 2004-US93	20040102
WO 2004061127	A3	20050630		
W: AE, AE, AG, AL, AL, AM, AM, AM, AT, AT, AU, AU, AZ, AZ, BA, BB, BG, BG, BR, BR, BW, BY, BY, BZ, BZ, CA, CH, CN, CN, CO, CO, CR, CR, CU, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EC, EE, EE, EG, ES, ES, FI, FI, GB, GD, GE, GE, GH, GH, GH, GM, HR, HR, HU, HU, ID, IL, IN, IS, JP, JP, KE, KE, KG, KG, KP, KP, KP, KR, KR, KZ, KZ, KZ, LC, LK, LR, LS, LS, LT, LU, LV, MA, MD, MD, MG, MK, MN, MW, MX, MX, MZ				
CA 2511874	AA	20040722	CA 2004-2511874	20040102

Searcher : Shears 571-272-2528

PRIORITY APPLN. INFO.: US 2003-437780P P 20030102

WO 2004-US93 W 20040102

AB The present invention provides use of sensor arrays containing hairpin probes for detecting nucleic acids of pathogens. Various nucleic acid probes, methods of making the sensor chip, biol. sensor devices that contain the sensor chip, and their methods of use are also disclosed.

L3 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 23 Apr 2003
ACCESSION NUMBER: 2003:311659 CAPLUS
DOCUMENT NUMBER: 139:163308
TITLE: Immunogenicity and protective effects of truncated recombinant leukotoxin **proteins** of **Fusobacterium necrophorum** in **mice**
AUTHOR(S): Narayanan, Sanjeev Kumar; Chengappa, M. M.; Stewart, George C.; Nagaraja, T. G.
CORPORATE SOURCE: College of Veterinary Medicine, Kansas State University, Manhattan, KS, 66506-5606, USA
SOURCE: Veterinary Microbiology (2003), 93(4), 335-347
CODEN: VMICDQ; ISSN: 0378-1135
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB **Fusobacterium necrophorum**, a gram-neg., anaerobic and rod-shaped bacterium, is generally an opportunistic pathogen and causes a wide variety of necrotic infections in animals and humans. Leukotoxin, a secreted **protein**, is a major virulence factor. The gene encoding the leukotoxin (lktA) in **F. necrophorum** has been cloned, sequenced and expressed in Escherichia coli. Because of low expression levels, problems associated with purifying full-length recombinant **protein**, and of the phys. instability of the **protein**, five overlapping leukotoxin gene truncations were constructed. The recombinant **polypeptides** (BSBSE, SX, GAS, SH, and FINAL) were expressed in E. coli and purified by nickel-affinity chromatog. The objectives were to investigate the effectiveness of the purified truncated **polypeptides** to induce protective immunity in **mice** challenged with **F. necrophorum**. The **polypeptides**, individually or in combination, and inactivated native leukotoxin or culture supernatant of **F. necrophorum** were homogenized with an adjuvant and injected into **mice** on days 0 and 21. Blood samples were collected to measure serum anti-leukotoxin antibody titers on days 0, 21 and 42 and on day 42, **mice** were exptl. challenged with **F. necrophorum**. All **polypeptides** were immunogenic, with GAS **polypeptide** eliciting the least antibody response. Two **polypeptides** (BSBSE and SH) induced significant protection in **mice** against **F. necrophorum** infection. Protection was better than the full-length native leukotoxin or inactivated supernatant. The study demonstrated that the leukotoxin of **F. necrophorum** carries epitopes that induce protective immunity against exptl. fusobacterial infection, thus providing further evidence to the importance of leukotoxin as a major virulence factor.
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE

RE FORMAT

L3 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 09 Nov 1998
ACCESSION NUMBER: 1998:708278 CAPLUS
DOCUMENT NUMBER: 130:62274
TITLE: The erythrocyte receptor for **Fusobacterium necrophorum** hemolysin: phosphatidylcholine as a possible candidate
AUTHOR(S): Amoako, Kingsley Kwaku; Goto, Yoshitaka; Misawa, Naoaki; Xu, De Long; Shinjo, Toshiharu
CORPORATE SOURCE: Faculty of Agriculture, Department of Veterinary Microbiology, Miyazaki University, Miyazaki, 889-21, Japan
SOURCE: FEMS Microbiology Letters (1998), 168(1), 65-70
CODEN: FMLED7; ISSN: 0378-1097
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB An attempt was made to determine the receptor for the hemolysin of **Fusobacterium necrophorum** using horse erythrocyte or its membranes as target. The spectrum of erythrocyte sensitivity has indicated that horse, dog and **mouse** erythrocytes are highly sensitive whereas cattle, sheep, goat and chicken red blood cells are insensitive to this hemolysin. A high correlation between sensitivity and phosphatidylcholine content of the erythrocyte membranes was noted. Binding of hemolysin to horse erythrocyte membranes was reduced significantly by prior treatment of membranes with phospholipase A2 but not with phospholipase C. Pretreatment of erythrocyte membranes with pronase, proteinase K, trypsin or neuraminidase did not alter binding of hemolysin to the membranes, suggesting that **protein** or sialyl residues are not involved as receptors. Gas liquid chromatog. anal. showed that the fatty acid profile from hydrolysis of bovine liver phosphatidylcholine by hemolysin and phospholipase A2 were similar. In conclusion, this report presents evidence that phosphatidylcholine may be acting as a possible receptor for the hemolysin of **F. necrophorum**.
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1978:187344 CAPLUS
DOCUMENT NUMBER: 88:187344
TITLE: Enhancement of experimental anaerobic infection by blood, hemoglobin, and hemostatic agents
AUTHOR(S): Hill, Gale B.
CORPORATE SOURCE: Dep. Obstet. Gynecol., Duke Univ. Med. Cent., Durham, NC, USA
SOURCE: Infection and Immunity (1978), 19(2), 443-9
CODEN: INFIBR; ISSN: 0019-9567
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Whole blood and other **protein** compds. encountered in surgical settings or trauma were tested for their effect on infectivity of nonsporeforming anaerobic bacteria. Infectious synergistic mixts. of Bacteroides fragilis plus Peptostreptococcus

anaerobius and Bacteroides melaninogenicus plus **Fusobacterium necrophorum** were each diluted to a barely noninfectious or minimally infectious concentration (subinfective inoculum) that was injected i.p. into **mice** alone and in combination with test **proteins**. Infectivity was measured by deaths from sepsis or abscess(es) within the abdominal cavity at autopsy at 1 wk. Two hemostatic agents, Gelfoam powder and Avitene (final concns., 10 mg/mL), and crystalline Hb (4 g/100 mL) each produced a marked increase in the rate of infection when mixed with a normally subinfective inoculum of either bacterial mixture Fresh homologous **mouse** blood (0.25 mL) injected i.p. without anticoagulant also significantly enhanced infectivity of a subinfective inoculum of B. fragilis plus P. anaerobius. These studies demonstrated the capacity of whole blood, Hb, and hemostatic agents to enhance the infectivity of certain nonsporeforming anaerobic bacteria.

L3 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1975:121358 CAPLUS
DOCUMENT NUMBER: 82:121358
TITLE: Characterization of endotoxin from **Fusobacterium necrophorum**
AUTHOR(S): Garcia, M. M.; Charlton, K. M.; McKay, K. A.
CORPORATE SOURCE: Anim. Pathol. Div., Anim. Dis. Res. Inst., Ottawa, ON, Can.
SOURCE: Infection and Immunity (1975), 11(2), 371-9
CODEN: INFIBR; ISSN: 0019-9567
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Endotoxic lipopolysaccharide (LPS) was obtained from phenol-water extraction of cell walls prepared from mass-cultivated **F. necrophorum**. The LPS was relatively free of nucleic acids and low in **protein**, and constituted about 4% of the cell walls. Upon acid hydrolysis, some of the components detected were hexosamines (7.0%), neutral and reducing sugars (40.5%), heptose (6.4%), 2-keto-3-deoxyoctonate (0.8%), lipid A (21.0%), and phosphorus (1.67%). Under electron microscopy the LPS appeared mainly as ribbon-like trilaminar structures, and upon chemical treatment it displayed a behavior resembling that reported in certain enterobacterial LPS. The LPS was lethal to **mice**, 11-day-old chicken embryos, and rabbits. Endotoxicity in **mice** was enhanced at least 1380-fold by the addition of 12.5 μg of actinomycin D. Induced tolerance to lethal effect of the endotoxin and rapidly acquired resistance to infection by **F. necrophorum** viable cells were also demonstrated in **mice**. The endotoxin produced both localized and generalized Shwartzman reactions as well as biphasic pyrogenic responses in rabbits.

FILE 'MEDLINE' ENTERED AT 15:43:47 ON 08 DEC 2005

FILE 'BIOSIS' ENTERED AT 15:43:47 ON 08 DEC 2005

FILE 'EMBASE' ENTERED AT 15:43:47 ON 08 DEC 2005

FILE 'WPIDS' ENTERED AT 15:43:47 ON 08 DEC 2005

FILE 'CONFSCI' ENTERED AT 15:43:47 ON 08 DEC 2005

FILE 'SCISEARCH' ENTERED AT 15:43:47 ON 08 DEC 2005

FILE 'JICST-EPLUS' ENTERED AT 15:43:47 ON 08 DEC 2005

FILE 'JAPIO' ENTERED AT 15:43:47 ON 08 DEC 2005

FILE 'VETU' ENTERED AT 15:43:47 ON 08 DEC 2005

FILE 'VETB' ENTERED AT 15:43:47 ON 08 DEC 2005

L4 37 S L3
L5 21 DUP REM L4 (16 DUPLICATES REMOVED)

L5 ANSWER 1 OF 21 MEDLINE on STN
ACCESSION NUMBER: 2004311316 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15213118
TITLE: ITIH4 (inter-alpha-trypsin inhibitor heavy chain 4) is a new acute-phase **protein** isolated from cattle during experimental infection.
AUTHOR: Pineiro M; Andres M; Iturralde M; Carmona S; Hirvonen J; Pyorala S; Heegaard P M H; Tjornehoj K; Lampreave F; Pineiro A; Alava M A
CORPORATE SOURCE: Departamento de Bioquimica y Biologia Molecular y Celular, Facultad de Ciencias, Universidad de Zaragoza, 50009 Zaragoza, Spain.
SOURCE: Infection and immunity, (2004 Jul) 72 (7) 3777-82. Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200408
ENTRY DATE: Entered STN: 20040625
Last Updated on STN: 20040807
Entered Medline: 20040806

AB We have isolated from calf serum a **protein** with an apparent M(r) of 120,000. The **protein** was detected by using antibodies against major acute-phase **protein** in pigs with acute inflammation. The amino acid sequence of an internal fragment revealed that this **protein** is the bovine counterpart of ITIH4, the heavy chain 4 of the inter-alpha-trypsin inhibitor family. The response of this **protein** in the sera was determined for animals during experimental bacterial and viral infections. In the bacterial model, animals were inoculated with a mixture of Actinomyces pyogenes, **Fusobacterium necrophorum**, and Peptostreptococcus indolicus to induce an acute-phase reaction. All animals developed moderate to severe clinical mastitis and exhibited remarkable increases in ITIH4 concentration in serum (from 3 to 12 times the initial values, peaking at 48 to 72 h after infection) that correlated with the severity of the disease. Animals with experimental infections with bovine respiratory syncytial virus (BRSV)

also showed increases in ITIH4 concentration (from two- to fivefold), which peaked at around 7 to 8 days after inoculation. Generally, no response was seen after a second infection of the same animals with the virus. Because of the significant induction of the **protein** in the animals in the mastitis and BRSV infection models, we can conclude that ITIH4 is a new positive acute-phase **protein** in cattle.

L5 ANSWER 2 OF 21 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2003195690 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12713895
TITLE: Immunogenicity and protective effects of truncated recombinant leukotoxin **proteins** of **Fusobacterium necrophorum** in **mice**.
AUTHOR: Narayanan Sanjeev Kumar; Chengappa M M; Stewart George C; Nagaraja T G
CORPORATE SOURCE: Department of Diagnostic Medicine/Pathobiology, College of Veterinary Medicine, Kansas State University, 305 Coles Hall, Manhattan, KS 66506-5606, USA.
SOURCE: Veterinary microbiology, (2003 Jun 10) 93 (4) 335-47. Journal code: 7705469. ISSN: 0378-1135.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200307
ENTRY DATE: Entered STN: 20030426
Last Updated on STN: 20030723
Entered Medline: 20030722

AB **Fusobacterium necrophorum**, a gram-negative, anaerobic and rod-shaped bacterium, is generally an opportunistic pathogen and causes a wide variety of necrotic infections in animals and humans. Leukotoxin, a secreted **protein**, is a major virulence factor. The gene encoding the leukotoxin (lktA) in **F. necrophorum** has been cloned, sequenced and expressed in Escherichia coli. Because of low expression levels, problems associated with purifying full-length recombinant **protein**, and of the physical instability of the **protein**, five overlapping leukotoxin gene truncations were constructed. The recombinant **polypeptides** (BSBSE, SX, GAS, SH, and FINAL) were expressed in E. coli and purified by nickel-affinity chromatography. The objectives were to investigate the effectiveness of the purified truncated **polypeptides** to induce protective immunity in **mice** challenged with **F. necrophorum**. The **polypeptides**, individually or in combination, and inactivated native leukotoxin or culture supernatant of **F. necrophorum** were homogenized with an adjuvant and injected into **mice** on days 0 and 21. Blood samples were collected to measure serum anti-leukotoxin antibody titers on days 0, 21 and 42 and on day 42, **mice** were experimentally challenged with **F. necrophorum**. All **polypeptides** were immunogenic, with GAS **polypeptide** eliciting the least antibody response. Two **polypeptides** (BSBSE and SH) induced significant protection in **mice** against **F. necrophorum** infection. Protection was better than the full-length native leukotoxin or inactivated supernatant.The study demonstrated that the leukotoxin of **F. necrophorum** carries epitopes that induce

protective immunity against experimental fusobacterial infection, thus providing further evidence to the importance of leukotoxin as a major virulence factor.

L5 ANSWER 3 OF 21 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 2002-049245 [06] WPIDS
DOC. NO. NON-CPI: N2002-036435
DOC. NO. CPI: C2002-013807
TITLE: **Fusobacterium necrophorum polypeptide** useful as vaccine in immunizing an animal against an infection e.g. foot rot, or liver abscesses caused by the bacterium.
DERWENT CLASS: B04 C06 D16 S03
INVENTOR(S): CHENGAPPA, M M; NAGARAJA, T G; NARAYANAN, S K; STEWART, G C
PATENT ASSIGNEE(S): (UNIV) UNIV KANSAS STATE RES FOUND; (CHEN-I) CHENGAPPA M M; (NAGA-I) NAGARAJA T G; (NARA-I) NARAYANAN S K; (STEW-I) STEWART G C; (UNIV) UNIV KANSAS RES FOUND
COUNTRY COUNT: 96
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001080886	A2	20011101	(200206)*	EN	108
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
AU 2001059138	A	20011107	(200219)		
US 2002054883	A1	20020509	(200235)		
EP 1283717	A1	20030219	(200321)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
US 6669940	B2	20031230	(200402)		
MX 2002010418	A1	20030401	(200415)		
US 2004047871	A1	20040311	(200419)		

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
WO 2001080886	A2		WO 2001-US13240	20010425
AU 2001059138	A		AU 2001-59138	20010425
US 2002054883	A1	CIP of	US 2000-558257	20000425
			US 2001-841786	20010424
EP 1283717	A1		EP 2001-932626	20010425
			WO 2001-US13240	20010425
US 6669940	B2	CIP of	US 2000-558257	20000425
			US 2001-841786	20010424
MX 2002010418	A1		WO 2001-US13240	20010425
			MX 2002-10418	20021022
US 2004047871	A1	CIP of	US 2000-558257	20000425
		Div ex	US 2001-841786	20010424
			US 2003-647057	20030822

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2001059138	A Based on	WO 2001080886
EP 1283717	A1 Based on	WO 2001080886
MX 2002010418	A1 Based on	WO 2001080886
US 2004047871	A1 Div ex	US 6669940

PRIORITY APPLN. INFO: US 2001-841786 20010424; US 2000-558257 20000425; US 2003-647057 20030822

AN 2002-049245 [06] WPIDS

AB WO 200180886 A UPAB: 20020128

NOVELTY - An isolated **Fusobacterium necrophorum polypeptide** (I) having an amino acid sequence having at least 50% sequence homology with a sequence (S1) of 369 (BSBSE), 927 (SX), 580 (GAS), 628 (SH), 773 (FINAL) or 338 (UPS) amino acids defined in the specification, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) an isolated polynucleotide (II) having a nucleotide sequence having at least 50% sequence homology with a sequence (S2) of 9726, 1130, 2780, 2141, 1887, 2322 or 1017 bp defined in the specification;

(2) an expression vector containing (II);

(3) a vaccine (III) comprising (I);

(4) a recombinantly derived **polypeptide** (IV) having sequence (S3) of 3241 amino acids defined in the specification or (S1);

(5) an isolated **polypeptide** (Im) which differs from (I) due to mutation event such as point mutations, deletions, insertions and rearrangements;

(6) an isolated polynucleotide (IIm) which differs from (II) due to mutation event such as point mutations, deletions, insertions and rearrangements;

(7) preparing (M1) a vaccine which confers effective immunity against infection caused by **F. necrophorum**, by providing **F. necrophorum** gene which expresses leukotoxin, expressing and recovering leukotoxin and combining the inactivated leukotoxin with a suitable carrier to produce the vaccine;

(8) a recombinant **polypeptide** (Ir1) which is recognized by anti-native leukotoxin antibodies in a western blot analysis;

(9) a recombinant **polypeptide** (Ir2) whose antisera neutralizes activity of native leukotoxin against bovine polymorphonuclear leukocytes, having 50% sequence homology with (S3), or (S1) having a sequence of 369 or 580 amino acids; and

(10) a recombinantly derived **polypeptide** (Ir3) sequence effective in conferring protective immunity against **F. necrophorum** in animals, where the sequence has 50% sequence identity to 1130 or 1887 bp as given in the specification.

ACTIVITY - Bactericide.

MECHANISM OF ACTION - Vaccine (claimed).

100 8-10 week old **mice**, were randomly divided into 10 groups of 10 **mice** each. The groups received five truncated leukotoxin **polypeptides** (BSBSE, SX, GAS, SH, and FINAL) individually, a mixture of BSBSE and GAS, admixture of all five truncated **polypeptides**, affinity purified native leukotoxin, inactivated culture supernatant, or PBS emulsified with Ribi adjuvant. Each **mouse** was injected subcutaneously on day 1 and day 21 with 200 mu l of one of the above preparations. The total amount of

antigen in each injection was 10 mu g per animal.

Inactivated culture supernatant was used without dilution to reconstitute Ribi adjuvant and each **mouse** was injected with 200 mu l of the emulsified preparation. Negative control group received 200 mu l of PBS emulsified with the Ribi adjuvant. The serum samples were analyzed for leukotoxin neutralizing antibody by ELISA. The results showed that antibodies (Ab) specific to (I) was raised in the **mice** vaccinated with various leukotoxin **polypeptides** and no Abs in the control group.

USE - (M1) is useful for preparing a vaccine (V) which confers effective immunity against infection caused by **F. necrophorum**. (III) comprising (I) is useful for immunizing an animal against liver abscesses caused by **F. necrophorum** and for preventing foot rot caused by **F. necrophorum** infection (claimed).

Dwg.0/11

L5 ANSWER 4 OF 21 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 1999:508059 BIOSIS
DOCUMENT NUMBER: PREV199900508059
TITLE: **Fusobacterium necrophorum** haemolysin stimulates motility of ileal longitudinal smooth muscle of the guinea-pig.
AUTHOR(S): Kanoe, M.; Toyoda, Y.; Shibata, H.; Nasu, T. [Reprint author]
CORPORATE SOURCE: Department of Veterinary Pharmacology, Faculty of Agriculture, Yamaguchi University, Yamaguchi, 753, Japan
SOURCE: Fundamental and Clinical Pharmacology, (1999) Vol. 13, No. 5, pp. 547-554. print.
ISSN: 0767-3981.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 3 Dec 1999
Last Updated on STN: 3 Dec 1999

AB **Fusobacterium necrophorum** haemolysin (0.5-3.1 mg **protein**/mL) dose-dependently induced contractions of the isolated ileal longitudinal smooth muscle of the guinea-pig. The haemolysin (3.1 mg **protein**/mL) -induced maximum contraction of 75% of the response to 60 mM K+ declined within 17 min and the muscles then demonstrated rhythmic contractions. Tetrodotoxin (3.1 X 10-6 M) had no effect on the contraction due to the haemolysin. After incubation in Ca2+-free medium, the ileal response to the haemolysin was lost. Verapamil, a Ca2+ channel blocker, dose-dependently inhibited the contraction to the haemolysin. The rabbit anti-serum against **F. necrophorum** haemolysin inhibited the haemolysin-induced contraction of ileal muscle. The bacterial haemagglutinin and the lipopolysaccharide had no effect on the response of ileal muscle. These findings suggest that the haemolysin-induced direct stimulation of ileal motility dependant on Ca2+ influx will increase the probability of contactof **F. necrophorum** and ileal mucosa and could increase the chances of colonization for **F. necrophorum**.

L5 ANSWER 5 OF 21 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 1998:711798 SCISEARCH
THE GENUINE ARTICLE: 119KC

TITLE: Changes in bacterial populations in the colon of pigs fed different sources of dietary fibre, and the development of swine dysentery after experimental infection

AUTHOR: Durmic Z; Pethick D W; Pluske J R; Hampson D J (Reprint)
CORPORATE SOURCE: Murdoch Univ, Div Vet & Biomed Sci, Murdoch, WA 6150, Australia (Reprint)
COUNTRY OF AUTHOR: Australia

SOURCE: JOURNAL OF APPLIED MICROBIOLOGY, (SEP 1998) Vol. 85, No. 3, pp. 574-582.
ISSN: 1364-5072.
PUBLISHER: BLACKWELL SCIENCE LTD, P O BOX 88, OSNEY MEAD, OXFORD OX2 0NE, OXON, ENGLAND.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 32
ENTRY DATE: Entered STN: 1998
Last Updated on STN: 1998

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Swine dysentery (SD) is a disease which can be controlled by feeding a diet low in dietary fibre. The influence of source and inclusion level of dietary fibre both on bacterial populations in the colon, and on subsequent development elf SD in pigs experimentally infected with Serpulina hyodysenteriae was evaluated. In Experiment I, pigs mere fed a low-fibre diet based on cool;ed rice and an animal **protein** supplement, or the same diet containing added insoluble (iNSP, fed as oaten chaff) or soluble (sNSP, fed as guar gum) non-starch polysaccharides, resistant starch (RS), or a combination of the last tt two (sNSP/RS). In Experiment 2, different levels of RS were added to the diet. With the base rice diet and with the addition of iNSP, the total number of colonic bacteria was low, the Gram-positive population predominated, S. hyodysenteriae did not colonize and SD did not develop. Synergistic bacteria (**Fusobacterium necrophorum** and Fus. nucleatum), which have been reported to facilitate colonization bg S, hyodysenteriae, were found only among isolates from pigs fed the sNSP/RS diet, and these animals developed SD. addition of RS to the diet increased total bacterial counts and stimulated growth of Gram-negative bacteria in the colon. In Experiment 1, this permitted colonization by S, hyodysenteriae, but not expression of SD. In contrast, in Experiment 2, this level of inclusion and two others allowed both colonization and development of SD. In conclusion, the addition of sNSP and/or RS to an otherwise protective rice-based diet generated changes in the large intestine microbiota which might have some influence on proliferation of S. hyodysenteriae and the development of SD.

L5 ANSWER 6 OF 21 MEDLINE on STN DUPLICATE 2

ACCESSION NUMBER: 1999028907 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9812364

TITLE: The erythrocyte receptor for **Fusobacterium necrophorum** hemolysin: phosphatidylcholine as a possible candidate.

AUTHOR: Amoako K K; Goto Y; Misawa N; Xu D L; Shinjo T
CORPORATE SOURCE: Department of Veterinary Microbiology, Faculty of Agriculture, Miyazaki University, Japan.

SOURCE: FEMS microbiology letters, (1998 Nov 1) 168 (1) 65-70.
Journal code: 7705721. ISSN: 0378-1097.
PUB. COUNTRY: Netherlands

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199812
ENTRY DATE: Entered STN: 19990115
Last Updated on STN: 19990115
Entered Medline: 19981223

AB An attempt was made to determine the receptor for the hemolysin of **Fusobacterium necrophorum** using horse erythrocyte or its membranes as target. The spectrum of erythrocyte sensitivity has indicated that horse, dog and **mouse** erythrocytes are highly sensitive whereas cattle, sheep, goat and chicken red blood cells are insensitive to this hemolysin. A high correlation between sensitivity and phosphatidylcholine content of the erythrocyte membranes was noted. Binding of hemolysin to horse erythrocyte membranes was reduced significantly by prior treatment of membranes with phospholipase A2 but not with phospholipase C. Pretreatment of erythrocyte membranes with pronase, proteinase K, trypsin or neuraminidase did not alter binding of hemolysin to the membranes, suggesting that **protein** or sialyl residues are not involved as receptors. Gas liquid chromatography analysis showed that the fatty acid profile from hydrolysis of bovine liver phosphatidylcholine by hemolysin and phospholipase A2 were similar. In conclusion, this report presents evidence that phosphatidylcholine may be acting as a possible receptor for the hemolysin of **F. necrophorum**.

L5 ANSWER 7 OF 21 EMBASE
ACCESSION NUMBER: 97166713 EMBASE
DOCUMENT NUMBER: 1997166713
TITLE: Interactions between **Fusobacterium necrophorum** hemolysin, erythrocytes and erythrocyte membranes.
AUTHOR: Amoako K.K.; Goto Y.; Misawa N.; Xu D.L.; Shinjo T.
CORPORATE SOURCE: T. Shinjo, Dept. of Veterinary Microbiology, Faculty of Agriculture, Miyazaki University, 1-1 Gakuen Kibanadai Nishi, Miyazaki 889-21, Japan. a0d503u@cc.miyazaki-u.ac.jp
SOURCE: FEMS Microbiology Letters, (1997) Vol. 150, No. 1, pp. 101-106.
Refs: 21
ISSN: 0378-1097 CODEN: FMLED7
PUBLISHER IDENT.: S 0378-1097(97)00104-3
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 970702
Last Updated on STN: 970702

AB The interactions between the hemolysin of **Fusobacterium necrophorum** subsp. necrophorum, erythrocytes and erythrocyte membranes were studied as an attempt to determine the initial characteristics leading to hemolysis. The spectrum of erythrocyte sensitivity indicated that horse, dog and **mouse** erythrocytes were highly sensitive whereas those of cattle, sheep, goat and chicken were insensitive to the hemolysin. Binding of hemolysin to horse and dog erythrocytes or their ghosts was more pronounced than to those of

cattle and sheep as detected by a decrease of hemolytic activity from hemolysin preparations. The kinetics of hemolysis revealed that lysis is preceded by a prelytic phase characterized by binding of hemolysin to erythrocytes. Treatment of horse erythrocytes with hemolysin at various temperatures prior to incubation at 37°C also revealed that this binding prelytic phase is temperature independent. This was followed by a temperature dependent lytic stage since erythrocytes pretreated with hemolysin and incubated at 4°C showed no hemolysis. An inverse relation was found between erythrocyte concentration and hemolytic activity suggesting a multiple-hit mechanism of hemolysis.

L5 ANSWER 8 OF 21 EMBASE COPYRIGHT (c) 2005 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 95090633 EMBASE
DOCUMENT NUMBER: 1995090633
TITLE: Dermonecrotic activity of a cell wall preparation from **Fusobacterium necrophorum.**
AUTHOR: Kanoe M.; Abe K.; Kai K.; Blobel H.
CORPORATE SOURCE: Department Veterinary Microbiology, Faculty of Agriculture, Yamaguchi University,Yamaguchi City 753, Japan
SOURCE: Letters in Applied Microbiology, (1995) Vol. 20, No. 3, pp. 145-147.
ISSN: 0266-8254 CODEN: LAMIE7
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
013 Dermatology and Venereology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 950503
Last Updated on STN: 950503

AB A cell wall preparation of **Fusobacterium necrophorum** induced haemorrhagic necrosis in the skins of guinea pigs and rabbits. Effects in **mice** and **rats** were weak or absent. The toxic activity of the cell wall preparation was not reduced by heat treatment. A dermonecrotic toxin was isolated from the cell wall preparation with sodium dodecylsulphate and concentrated by precipitation with ethanol. A preparation of the bacterial cytoplasm from Fus. neocrophorum induced mainly erythema.

L5 ANSWER 9 OF 21 VETU COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 1990-60124 VETU M C
TITLE: Isolation and Characterization of Thioxamycin.
AUTHOR: Matsumoto M; Kawamura Y; Yasuda Y; Tanimoto T; Matsumoto K; Yoshid
CORPORATE SOURCE: Shionogi
LOCATION: Osaka, Jap.
SOURCE: J.Antibiot. (42, No. 10, 1465-69, 1989) 4 Fig. 4 Tab. 5 Ref. (W50/JLC)
CODEN: JANTAJ
AVAIL. OF DOC.: Shionogi Research Laboratories, Shionogi & Co. Ltd., Fukushima-ku, Osaka 553, Japan. (7 authors).
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT; MPC
AN 1990-60124 VETU M C
AB A new **peptide** antibiotic thioxamycin (TX), containing

thiazole and oxazole rings, was isolated from the mycelia of Streptomyces spp. strain PA-46025. TX is acidic and lipophilic and on hydrolysis gave rise to threonine, S-methyl cysteine, aminoethyl thiazole carboxylic acid and aminomethylthiazole carboxylic acid. The taxonomy of the Streptomyces strain is detailed. TX was active in vitro (MIC) against Bifidobact., Eubact., Clostr., Bacteroides, Strept., Peptococcus, Peptostrept. and some species of Fusobact., including the veterinary pathogen, **F. necrophorum** . It was much less active against Propionibact., Veillonella and other Fusobact. spp. TX was non-toxic to **mice** when given i.p.

ABEX The vegetative mycelia of the strain grew well on both synthetic and organic media. The strain was positive for the production of melanoid pigment, the peptonization of milk, the hydrolysis of starch and the liquifaction of gelatin. It was negative for the tyrosinase reaction and the coagulation of milk. From its taxonomic properties, the organism was identified as Streptomyces. Most of the antibiotic activity was found in the mycelium. Following organic extraction and silica gel TLC, 250 mg of TX was obtained from 150 l of fermentation broth. Hydrolysis of the compound with 6N HCl gave rise to 1 mol each of threonine, S-methyl-L-cysteine, 2-aminomethylthiazole-4-carboxylic acid and 2-(1-aminoethyl) thiazole-4-carboxylic acid. The MIC values for TX were 0.39 ug/ml against Clostr. perfringens, 0.78 ug/ml against Bifido. bifidum and longum, 1.56 ug/ml against Eubact. limosum and Bifido. adolescentis, 3.13 ug/ml against Eubact. aerofaciens and Clostr. difficile, 6.25 ug/ml against Peptococcus asaccharolyticus, Strept. constellatus and Bac. vulgatus and melaninogenicus, 12.5 ug/ml against Peptococus prevotti, Peptostrept. micros, Bac. fragilis and Fusobact. nucleatum, 25 ug/ml against Bacteroides fragilis and thetaiotaomicron and Fusobact. necrophorum and 100 ug/ml or greater against Propionibact. acnes, Veillonella parvula and Fusobact. varium and mortiferum. TX (50 mg/kg, i.p.) was not toxic to **mice**.

L5 ANSWER 10 OF 21 MEDLINE on STN
ACCESSION NUMBER: 90069485 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2685989
TITLE: Virulence determinants in nonsporeforming anaerobic bacteria.
AUTHOR: Hofstad T
CORPORATE SOURCE: Department of Microbiology and Immunology, Gade Institute, University of Bergen, Norway.
SOURCE: Scandinavian journal of infectious diseases. Supplementum, (1989) 62 15-24. Ref: 105
Journal code: 0251025. ISSN: 0300-8878.
PUB. COUNTRY: Sweden
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199001
ENTRY DATE: Entered STN: 19900328
Last Updated on STN: 19900328
Entered Medline: 19900104

AB The literature dealing with adherence, host-protective mechanisms and tissues damaging products of nonsporeforming anaerobes is reviewed. The adherence mechanisms are poorly understood. There is evidence for that encapsulation plays a role in the pathogenicity of Bacteroides

fragilis and black-pigmented bacteroides. A leukocidin is produced by **Fusobacterium necrophorum**, and Ig protease, collagenase and a trypsin-like enzyme by some Bacteroides species. Some Bacteroides fragilis strains produce an enterotoxin. The pathogenetic role of endotoxin is unclear.

L5 ANSWER 11 OF 21 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 87044074 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3776094
TITLE: Generation of immunity against **Fusobacterium necrophorum** in **mice** inoculated with extracts containing leucocidin.
AUTHOR: Emery D L; Vaughan J A
SOURCE: Veterinary microbiology, (1986 Sep) 12 (3) 255-68. Journal code: 7705469. ISSN: 0378-1135.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198612
ENTRY DATE: Entered STN: 19900302
Last Updated on STN: 19900302
Entered Medline: 19861202

AB The capacity of extracts from toxigenic and non-toxigenic ruminant strains of **Fusobacterium necrophorum** to protect against challenge with homologous and heterologous bacteria was examined in **mice**. The numbers of **F. necrophorum** which were infective or lethal for **mice** increased 5- to 8-fold in animals which had been previously inoculated with complete Freund's adjuvant (FCA). Although preparations containing lipopolysaccharide (LPS) and outer membrane **proteins** (OMP) from several strains gave protection against a non-toxigenic strain (FnB-3), they did not significantly immunize **mice** against a challenge infection with a toxigenic bovine strain, FnB-1. Only material which had been prepared by gel filtration of 18-h liquid culture supernates of toxigenic **F. necrophorum** elicited significant immunity against homologous challenge with FnB-1. This preparation contained LPS and the majority of the leucotoxic activity. However, passive protection was not afforded to **mice** inoculated with bovine or rabbit sera which possessed high neutralization titres against the leucocidin.

L5 ANSWER 12 OF 21 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 1985:230781 BIOSIS
DOCUMENT NUMBER: PREV198579010777; BA79:10777
TITLE: PRODUCTION PURIFICATION AND CHARACTERIZATION OF CHANDRAMYCIN A **POLYPEPTIDE** ANTIBIOTIC FROM STREPTOMYCES-LYDICUS.
AUTHOR(S): SINGH S K [Reprint author]; GURUSIDDAIAH S
CORPORATE SOURCE: BIOANALYTICAL CENT, WASHINGTON STATE UNIV, PULLMAN, WASH 99164, USA
SOURCE: Antimicrobial Agents and Chemotherapy, (1984) Vol. 26, No. 3, pp. 394-400. CODEN: AMACCQ. ISSN: 0066-4804.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

AB A plant pathogenic actinomycete identified as S. lydicus was isolated

from the deep-pitted scab lesions of potato tubers. This strain produces a new **polypeptide** antibiotic named chandramycin. The antibiotic was isolated from culture broth by extraction with organic solvents and purified by chromatography. The purified antibiotic is a light-yellow crystalline compound soluble in water and in most organic solvents. Amino acid analysis of the acid hydrolysates of chandramycin revealed the presence of Gly, cis-methyl proline, Val, β,β-dimethylaminobutyric acid, β-methyl-phenylalanine and β-2-thioazolyl-β-alanine. The amino acid composition of chandramycin is qualitatively similar to that of a known antibiotic, bottromycin A2. Chandramycin showed activity against several gram-positive and a few gram-negative species of bacteria [Actinomyces viscosus, Bacillus subtilis, Bacteroides fragilis, B. multiacidus, Clostridium perfringens, C. septicum, Erwinia amylovora, Escherichia coli, **Fusobacterium necrophorum**, Lactobacillus acidophilus, Pseudomonas aeruginosa, Salmonella typhimurium, Sarcina lutea, Staphylococcus aureus, Streptococcus faecalis, S. mutans and S. bovis]. It showed a strong activity against anaerobic micoorganisms. Oral doses of antibiotic when administered up to 466 mg/kg of body wt failed to produce any observable toxic effect in **mice**.

L5 ANSWER 13 OF 21 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 82228842 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6807141
TITLE: Induction of immunologic memory by a lipopolysaccharide-**protein** complex isolated from **Fusobacterium necrophorum**: humoral response.
AUTHOR: Hodges G F; Regan K M; Foss C L; Teresa G W
SOURCE: American journal of veterinary research, (1982 Jan) 43 (1) 122-9.
Journal code: 0375011. ISSN: 0002-9645.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198208
ENTRY DATE: Entered STN: 19900317
Last Updated on STN: 19900317
Entered Medline: 19820814

AB The serum antibody response in BALB/c **mice** to a lipopolysaccharide-**protein** (LPS-P) complex was monitored by the enzyme-linked immunosorbent assay, total and 2-mercaptoethanol-resistant hemagglutination, and radial immunodiffusion. Dose-response analyses demonstrated that suitable primary doses of LPS-P injected IV or IM induced substantial concentrautions of specific serum immunoglobulin (Ig) M and IgG. Moreover, these values were greatly enhanced with small-dose booster injections. Inoculation of **mice** with a suitable primary IM dose of aluminum hydroxide-precipitated LPS-P-induced specific IgM and IgG amounts that were detectable for 120 days. An enhanced secondary response to antigen booster injections was generated 105 days after primary inoculation, providing direct evidence that LPS-P can induce immunologic memory. Similar results were obtained for IV inoculations of LPS-P, although the primary IgG response was not as persistent. Seemingly, the memory response to LPS-P was largely dependent on the **protein** component of the molecule.

L5 ANSWER 14 OF 21 MEDLINE on STN DUPLICATE 5
ACCESSION NUMBER: 82228840 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7046528
TITLE: Induction of immunologic memory by a lipopolysaccharide-**protein** complex isolated from **Fusobacterium necrophorum**: cellular response.
AUTHOR: Hodges G F; Regan K M; Foss C L; Teresa G W
SOURCE: American journal of veterinary research, (1982 Jan) 43 (1) 117-21.
Journal code: 0375011. ISSN: 0002-9645.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198208
ENTRY DATE: Entered STN: 19900317
Last Updated on STN: 19900317
Entered Medline: 19820814

AB The ability of a lipopolysaccharide **protein** (LPS-P) complex extracted from **Fusobacterium necrophorum** to establish immunologic memory in BALB/c **mice** splenocytes was demonstrated. The LPS-P molecule differed from the phenol water-extracted LPS because it contained approximately 12% **protein**. Initial experiments showed that primary and secondary spleen plaque-forming cell (PFC) responses to IV or IM injections of LPS-P were highly dose-dependent. Suitable primary doses stimulated significant (P less than 0.05) amounts of direct and direct + indirect PFC by postinoculation day (PID) 14 and primed the **mice** for an enhanced secondary response to small booster injections. When **mice** were inoculated with a suitable primary IM dose of aluminum hydroxide-precipitated LPS-P, significant amounts of direct and direct + indirect PFC were detectable through PID 120. Moreover, significant enhancement of these values was attained with an IV booster injection at PID 105. Primary IV inoculation with LPS-P produced similar results, although the primary response was not as persistent.

L5 ANSWER 15 OF 21 VETB COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 1982-62017 T M
TITLE: INDUCTION OF IMMUNOLOGIC MEMORY BY A LIPOPOLYSACCHARIDE-**PROTEIN** COMPLEX ISOLATED FROM **FUSOBACTERIUM NECROPHORUM**. CELLULAR RESPONSE. HUMORAL RESPONSE.
AUTHOR: HODGES G F; REGAN K M; FOSS C L; TERESA G W
LOCATION: MOSCOW,IDAHO,USA.
SOURCE: AM.J.VET.RES. (43, NO.1, 117-29, 1982)
LANGUAGE: English

L5 ANSWER 16 OF 21 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN DUPLICATE 6
ACCESSION NUMBER: 1978:215633 BIOSIS
DOCUMENT NUMBER: PREV197866028130; BA66:28130
TITLE: ENHANCEMENT OF EXPERIMENTAL ANAEROBIC INFECTIONS BY BLOOD HEMO GLOBIN AND HEMOSTATIC AGENTS.
AUTHOR(S): HILL G B [Reprint author]
CORPORATE SOURCE: DEP OBSTET GYNECOL, DUKE UNIV MED SCH, DURHAM, NC 27710, USA
SOURCE: Infection and Immunity, (1978) Vol. 19, No. 2, pp.

Searcher : Shears 571-272-2528

443-449.
CODEN: INFIBR. ISSN: 0019-9567.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
AB Certain foreign materials have been demonstrated to enhance the infectivity of aerobic and anaerobic bacteria. Whole blood and other **protein** compounds encountered in surgical settings or trauma were tested for their effect on infectivity of nonsporeforming anaerobic bacteria. Infectious synergistic mixtures of Bacteroides fragilis plus Peptostreptococcus anaerobius and Bacteroides melaninogenicus plus **Fusobacterium necrophorum** were each diluted to a barely noninfectious or minimally infectious concentration (subinfective inoculum) that was injected i.p. into **mice** alone and in combination with test **proteins.** Infectivity was measured by deaths from sepsis or abscess(es) within the abdominal cavity at autopsy at 1 wk. Two hemostatic agents, Gelfoam powder and Avitene (final concentrations, 10 mg/ml) and crystalline Hb (4 g/100 ml) each produced a marked increase ($P < 0.001$) in the rate of infection when mixed with a normally subinfective inoculum of either bacterial mixture. Fresh homologous **mouse** blood (0.25 ml) injected i.p. without anticoagulant also significantly enhanced infectivity ($P < 0.01$) of a subinfective inoculum of B. fragilis plus P. anaerobius. The capacity of whole blood, Hb and hemostatic agents to enhance the infectivity of certain nonsporeforming anaerobic bacteria was demonstrated. The high concentrations of anaerobic bacteria in the gastrointestinal, female genital and respiratory tracts produce an increased risk of human infection after surgery or trauma in these sites; the **protein** agents studied here may further enhance infection.

L5 ANSWER 17 OF 21 MEDLINE on STN DUPLICATE 7
ACCESSION NUMBER: 78166796 MEDLINE
DOCUMENT NUMBER: PubMed ID: 647451
TITLE: Intraperitoneal immunization against necrobacillosis in experimental animals.
AUTHOR: Garcia M M; McKay K A
SOURCE: Canadian journal of comparative medicine. Revue canadienne de medecine comparee, (1978 Jan) 42 (1) 121-7.
Journal code: 0151747. ISSN: 0008-4050.
PUB. COUNTRY: Canada
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197807
ENTRY DATE: Entered STN: 19900314
Last Updated on STN: 19900314
Entered Medline: 19780724
AB Experiments employing recently developed **mouse** models indicated that intraperitoneal immunization with the cytoplasm (intracellular fraction) of **Fusobacterium necrophorum** protected the animals from a lethal challenge of the pathogen. The critical immunization schedule needed to achieve complete protection involved six weekly intraperitoneal doses of the intracellular antigen. Livers of immunized **mice** were cleared of infecting fusobacterial within 24 hours whereas those of nonimmunized **mice** harboured increasing numbers of hte bacteria. Sera from both groups did not protect recipient

mice form developing liver abscesses after challenge. Sheep immunized intraperitoneally with 20 mg of cytoplasmic **protein** given in three doseases were protected against the development of abscesses induced by **F. necrophorum**.

L5 ANSWER 18 OF 21 MEDLINE on STN
ACCESSION NUMBER: 77195361 MEDLINE
DOCUMENT NUMBER: PubMed ID: 405737
TITLE: Endotoxic activities of lipopolysaccharides of microorganisms isolated from an infected root canal in Macaca cynomolgus.
AUTHOR: Dahlen G; Hofstad T
SOURCE: Scandinavian journal of dental research, (1977 May) 85 (4) 272-8.
Journal code: 0270023. ISSN: 0029-845X.
PUB. COUNTRY: Denmark
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Dental Journals; Priority Journals
ENTRY MONTH: 197707
ENTRY DATE: Entered STN: 19900314
Last Updated on STN: 19900314
Entered Medline: 19770729

AB Lipopolysaccharides (LPS) prepared from a strain of Bacteroides oralis, a strain of **Fusobacterium necrophorum**, and a strain of F. nucleatum, all isolated from an infected root canal in monkey (Macaca cynomolgus), were examined for endotoxic activities using primary skin reactions in rabbits and induction of leukocyte chemotaxis in **rats**. LPS of B. oralis showed considerably lower ability to cause skin inflammation than LPS of the fusobacteria. However, the leukotactic effect of the LPS preparations as determined by the wound chamber method in **rats** was approximately of the same proportion. In both tests the reactions were compared with those of commercial LPS of Salmonella typhi. This study shows that endotoxic LPS can be isolated from oral Gram-negative bacteria, which have infected the root canal. Therefore LPS may play a role in the development and maintenance of chronic inflammation of the periapical tissues.

L5 ANSWER 19 OF 21 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 1977:48269 BIOSIS
DOCUMENT NUMBER: PREV197713048269; BR13:48269
TITLE: IMMUNOLOGIC RESPONSES OF GERM-FREE **RATS** TO MONO ASSOCIATION WITH ANAEROBIC BACTERIA.
AUTHOR(S): WELLS C L; BALISH E; YALE C E
SOURCE: Abstracts of the Annual Meeting of the American Society for Microbiology, (1977) Vol. 77, pp. 18.
CODEN: ASMACK. ISSN: 0094-8519.
DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: Unavailable

L5 ANSWER 20 OF 21 MEDLINE on STN DUPLICATE 8
ACCESSION NUMBER: 75132527 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1120608
TITLE: Biological characterization of **Fusobacterium necrophorum**. Cell fractions in preparation for toxin and immunization studies.

Searcher : Shears 571-272-2528

AUTHOR: Garcia M M; Alexander D C; McKay K A
SOURCE: Infection and immunity, (1975 Apr) 11 (4) 609-16.
Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197506
ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19900310
Entered Medline: 19750621

AB **Fusobacterium necrophorum** isolated from bovine liver abscesses was grown in bulk at 37 C for 24 h under a strict anaerobic atmosphere. Harvested washed cells were disrupted ultrasonically and fractionated by differential centrifugation into the intracellular (cytoplasm) and cell wall fractions. Both intact cells and cell fractions induced generalized cytopathic effect on primary pig kidney cultures and caused a variety of signs of illness and/or death of intraperitoneally injected **mice**. The intact cells, disrupted cells, and cell walls produced necrotic lesions and erythema on intradermally injected guinea pigs and rabbits, whereas the cytoplasm mainly erythema. By contrast, the used culture medium (culture filtrate) of **F. necrophorum** did not show any detectable toxicity. The toxic component of the cytoplasm appears to be associated with nondialyzable, hemolytic, high-molecular-weight **proteins** and its toxicity is reduced by trypsin and pronase. Heating at 60 C for 10 min decreased markedly its erythemal and cytotoxic ability, wheras the toxicity of the cell walls appeared to be only slightly affected even when heated at 100 C for 1 h. These results suggest that at leasttwo distinct cell-bound toxic factors are present in **F. necrophorum** cells.

L5 ANSWER 21 OF 21 MEDLINE on STN DUPLICATE 9
ACCESSION NUMBER: 75094753 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1112618
TITLE: Characterization of endotoxin from **Fusobacterium necrophorun.**
AUTHOR: Garcia M M; Charlton K M; McKay K A
SOURCE: Infection and immunity, (1975 Feb) 11 (2) 371-9.
Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197505
ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19900310
Entered Medline: 19750509

AB Endotoxic lipopolysachharide (LPS) was obtained from phenol-water extraction of cell walls prepared from mass-cultivated **Fusobacterium necrophorum**. The LPS was relatively free of nucleic acids and low in **protein**, and constituted about 4% of the cell walls. Upon acid hydrolysis, some of the components detected were hexosamines (7.0%), neutral and reducing sugars (50.5%), heptose (6.4%), 2-keto-3-deoxyoctonate (0.8%), lipid A (21.0%), and phosphorus (1.7%). Under electron microscopy the LPS appeared mainly as ribbon-like trilaminar structures, and upon chemical treatment it displayed a behavior resembling that reported in certain enterobacterial LPS. The LPS was lethal to **mice**,

11-day-old chicken embryos, and rabbits. Endotoxicity in **mice** was enhanced at least 1,380-fold by the addition of 12.5 mug of actinomycin D. Induced tolerance to lethal effect of the endotoxin and rapidly acquired resistance to infection by F. necrophrum viable cells were also demonstrated in **mice**. The endotoxin produced both localized and generalized Shwartzman reactions as well as biphasic pyrogenic responses in rabbits. These results firmly establish the presence of a classical endotoxin in **F. necrophorum**, thus providing strong support to our recent suggestion that cell wall-associated components may contribute significantly to the pathogenicity of **F. necrophorum**
.

FILE 'CAPLUS' ENTERED AT 15:45:36 ON 08 DEC 2005
L6 0 S L1 AND (MUS OR M)(W)(DOMESTIC? OR MUSCULUS)

FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH, JICST-EPLUS, JAPIO, VETU, VETB' ENTERED AT 15:49:33 ON 08 DEC 2005
L7 0 S L6

(FILE 'CAPLUS' ENTERED AT 15:51:18 ON 08 DEC 2005)
L8 154 SEA FILE=CAPLUS ABB=ON PLU=ON (FUSOBACTER? OR SPHAEROPHOR ?)(S)INFECTION OR NECROBACILLOSIS
L9 39 SEA FILE=CAPLUS ABB=ON PLU=ON L8 AND ((MUS OR M)(W)(DOMES TIC? OR MUSCULUS) OR MICE OR MOUSE OR RAT OR RODENT)
L10 3 SEA FILE=CAPLUS ABB=ON PLU=ON L9 AND (POLYPEPTIDE OR PEPTIDE OR PROTEIN OR POLYPROTEIN)

L11 2 L10 NOT L3

L11 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 10 Oct 2003
ACCESSION NUMBER: 2003:796878 CAPLUS
DOCUMENT NUMBER: 139:306530
TITLE: Flt3-ligand for enhancing immune response of vaccine against cancer, allergy and infection
INVENTOR(S): Mckenna, Hilary J.; Liebowitz, David N.; Maliszewski, Charles R.
PATENT ASSIGNEE(S): Immunex Corporation, USA
SOURCE: PCT Int. Appl., 96 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003083083	A2	20031009	WO 2003-US9773	20030326
WO 2003083083	A3	20040624		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,

EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2480128	AA	20031009	CA 2003-2480128	20030326
US 2004022760	A1	20040205	US 2003-401364	20030326
EP 1487477	A2	20041222	EP 2003-721501	20030326
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2005528373	T2	20050922	JP 2003-580519	20030326
PRIORITY APPLN. INFO.:			US 2002-368263P P	20020326
			US 2002-427835P P	20021119
			WO 2003-US9773 W	20030326

AB The present invention relates to methods of using Flt3-ligand (Flt3-L) in immunization protocols to enhance immune responses against vaccine antigens. Embodiments include administering Flt3-ligand prior to immunizing a subject with a vaccine, wherein the vaccine comprises at least one antigen formulated in one or more adjuvants. Methods of treating and preventing cancer, allergy and infection using Flt3-ligand immunization protocols are also provided. Methods of using Flt3-ligand immunization protocols for in vivo evaluation of antigens and adjuvants are also provided.

L11 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN
ED Entered STN: 19 Feb 1997
ACCESSION NUMBER: 1997:113705 CAPLUS
DOCUMENT NUMBER: 126:184934
TITLE: Increase of heat-shock **protein** and induction of γ/δ T cells in peritoneal exudate of **mice** after injection of live Fusobacterium nucleatum
AUTHOR(S): Saito, K.; Katsuragi, H.; Mikami, M.; Kato, C.; Miyamaru, M.; Nagaso, K.
CORPORATE SOURCE: Department of Oral Microbiology, Nippon Dental University, Niigata, Japan
SOURCE: Immunology (1997), 90(2), 229-235
CODEN: IMMUAM; ISSN: 0019-2805
PUBLISHER: Blackwell
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Fusobacterium nucleatum and Actinobacillus actinomycetemcomitans are Gram-neg. rod periodontal pathogens. The peritoneal cavity of Institute of Cancer Research (ICR) **mice** was used as the local infection model. In vivo production of heat-shock **proteins** (hsp) was studied by injection of 1/10 min. LD (MLD) of each live bacteria into **mice**. Heat-shock **proteins** 70 and 60 were examined in the extract of peritoneal exudate cells (PEC) from **mice** injected i.p. with either F.nucleatum or A. actinomycetemcomitans by using SDS-PAGE and immunoblotting anal. Although hsp are present in PEC without injection of bacteria, both hsp increased and reached a peak on day 3 after F. nucleatum injection but not after A actinomycetemcomitans. Kinetic study of γ/δ T cells in PEC after injection of bacteria showed that the increase of γ/δ T cells was observed only in the PEC from **mice** injected with F nucleatum but not A. actinomycetemcomitans. The γ/δ T cells in PEC were either CD3+ and CD4+ or CD3+ and CD8+. The differential cell count of PEC

suggested that γ/δ T cell induction is related to the expansion of the macrophage population. The phagocytic and chemiluminescence responses of macrophages against the same bacteria were compared after intensive immunization with live F. nucleatum and A. actinomycetemcomitans. Elevations of chemiluminescence response and phagocytic function by immunization were observed in the macrophages of **mice** immunized with F. nucleatum. These results suggest the sequential appearance of hsp. γ/δ T cells and macrophage activation after **fusobacterial infection**

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REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

(FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH, JICST-EPLUS, JAPIO, VETU, VETB' ENTERED AT 15:58:00 ON 08 DEC 2005)

L12 20 S L10
L13 12 S L12 NOT L4
L14 9 DUP REM L13 (3 DUPLICATES REMOVED)

L14 ANSWER 1 OF 9 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 2005:423609 BIOSIS
DOCUMENT NUMBER: PREV200510206256
TITLE: Identification and characterization of a novel adhesin unique to oral fusobacteria.
AUTHOR(S): Han, Yiping W. [Reprint Author]; Ikegami, Akihiko; Rajanna, Chythanya; Kawsar, Hameem I.; Zhou, Yun; Li, Mei; Sojar, Hakimuddin T.; Genco, Robert J.; Kuramitsu, Howard K.; Deng, Cheri X.
CORPORATE SOURCE: Case Western Reserve Univ, Sch Dent Med, Dept Biol Sci, 10900 Euclid Ave, Cleveland, OH 44106 USA
ywh2@case.edu
SOURCE: Journal of Bacteriology, (AUG 2005) Vol. 187, No. 15, pp. 5330-5340.
CODEN: JOBAAY. ISSN: 0021-9193.
DOCUMENT TYPE: Article
LANGUAGE: English
OTHER SOURCE: GenBank-AY850357; EMBL-AY850357; DDJB-AY850357; GenBank-DQ012969; EMBL-DQ012969; DDJB-DQ012969; GenBank-DQ012972; EMBL-DQ012972; DDJB-DQ012972; GenBank-DQ012973; EMBL-DQ012973; DDJB-DQ012973; GenBank-DQ012974; EMBL-DQ012974; DDJB-DQ012974; GenBank-DQ012975; EMBL-DQ012975; DDJB-DQ012975; GenBank-DQ012976; EMBL-DQ012976; DDJB-DQ012976; GenBank-DQ012977; EMBL-DQ012977; DDJB-DQ012977; GenBank-DQ012978DQ012980; EMBL-DQ012978DQ012980; DDJB-DQ012978DQ012980; GenBank-DQ012981; EMBL-DQ012981; DDJB-DQ012981
ENTRY DATE: Entered STN: 19 Oct 2005
Last Updated on STN: 19 Oct 2005

AB **Fusobacterium** nucleatum is a gram-negative anaerobe that is prevalent in periodontal disease and **infections** of different parts of the body. The organism has remarkable adherence properties, binding to partners ranging from eukaryotic and prokaryotic cells to extracellular macromolecules. Understanding its adherence is important for understanding the pathogenesis of F. nucleatum. In this study, a novel adhesin, FadA (Fusobacterium adhesin A), was demonstrated to bind to the surface **proteins** of the oral

mucosal KB cells. FadA is composed of 129 amino acid (aa) residues, including an 18-aa signal **peptide**, with calculated molecular masses of 13.6 kDa for the intact form and 12.6 kDa for the secreted form. It is highly conserved among F. nucleatum, Fusobacterium periodonticum, and Fusobacterium simiae, the three most closely related oral species, but is absent in the nonoral species, including Fusobacterium gonidiaformans, Fusobacterium mortiferum, Fusobacterium navi-forme, Fusobacterium russii, and Fusobacterium ulcerans. In addition to FadA, F. nucleatum ATCC 25586 and ATCC 49256 also encode two paralogues, FN1529 and FNV2159, each sharing 31% identity with FadA. A double-crossover fadA deletion mutant, F. nucleatum 12230-US1, was constructed by utilizing a novel sonoporation procedure. The mutant had a slightly slower growth rate, yet its binding to KB and Chinese hamster ovarian cells was reduced by 70 to 80% compared to that of the wild type, indicating that FadA plays an important role in fusobacterial colonization in the host. Furthermore, due to its uniqueness to oral Fusobacterium species, fadA may be used as a marker to detect orally related fusobacteria. F. nucleatum isolated from other parts of the body may originate from the oral cavity.

L14 ANSWER 2 OF 9 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 2004-340902 [31] WPIDS
DOC. NO. CPI: C2004-129513
TITLE: New nucleic acid that generates an amplification product from L. intracellularis nucleic acid using an appropriate second nucleic acid molecule, useful for treating and preventing L. intracellularis infection.
DERWENT CLASS: B04 C06 D16
INVENTOR(S): GEBHART, C J; KAPUR, V
PATENT ASSIGNEE(S): (MINU) UNIV MINNESOTA
COUNTRY COUNT: 107
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2004033631	A2	20040422	(200431)*	EN	87
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW					
AU 2003295341	A1	20040504	(200465)		
EP 1570045	A2	20050907	(200559)	EN	
R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2004033631	A2	WO 2003-US31318	20031001
AU 2003295341	A1	AU 2003-295341	20031001
EP 1570045	A2	EP 2003-786523	20031001
		WO 2003-US31318	20031001

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2003295341	A1 Based on	WO 2004033631
EP 1570045	A2 Based on	WO 2004033631

PRIORITY APPLN. INFO: US 2002-416395P 20021004
AN 2004-340902 [31] WPIDS
AB WO2004033631 A UPAB: 20040514
NOVELTY - An isolated nucleic acid comprising a nucleic acid molecule of at least 10 nucleotides in length having at least 75% identity to a sequence not defined in the specification, where any of the molecule that is 10-29 nucleotides in length, under standard amplification conditions, generates an amplification product from L. intracellularis nucleic acid using an appropriate second nucleic acid molecule, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a vector comprising the nucleic acid;

(2) a host cell comprising the vector;

(3) an isolated **polypeptide** encoded by the nucleic acid;

(4) an article of manufacture comprising the **polypeptide**;

(5) an antibody having specific binding affinity for the **polypeptide**;

(6) a method for detecting the presence or absence of L. intracellularis in a biological sample;

(7) a method of preventing infection by L. intracellularis in an animal;

(8) a composition comprising a first oligonucleotide primer and a second oligonucleotide primer, where the first and second primers are each 10 to 50 nucleotides in length, and where in the presence of L. intracellularis nucleic acid, generate an amplification product under standard amplification conditions, but do not generate an amplification product in the presence of nucleic acid from tar organism other than L. intracellularis; and

(9) an article of manufacture comprising the composition.

ACTIVITY - Antibacterial. No biological data given.

MECHANISM OF ACTION - Immunotherapy.

USE - The nucleic acid and **polypeptides** are useful for treating and preventing L. intracellularis infection (claimed).

Dwg.0/3

L14 ANSWER 3 OF 9 MEDLINE on STN
ACCESSION NUMBER: 2002284780 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12011011
TITLE: **Mice** lacking monocyte chemoattractant **protein** 1 have enhanced susceptibility to an interstitial polymicrobial infection due to impaired monocyte recruitment.
AUTHOR: Chae P; Im M; Gibson F; Jiang Y; Graves D T
CORPORATE SOURCE: Department of Endodontics, Boston University School of Dental Medicine, Massachusetts 02118, USA.
CONTRACT NUMBER: DE07559 (NIDCR)
SOURCE: Infection and immunity, (2002 Jun) 70 (6) 3164-9. Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200206
ENTRY DATE: Entered STN: 20020528
Last Updated on STN: 20020627
Entered Medline: 20020626

AB Monocyte chemoattractant **protein** 1 (MCP-1) is an important chemokine that induces monocyte recruitment in a number of different pathologies, including infection. To investigate the role of MCP-1 in protecting a host from a chronic interstitial polymicrobial infection, dental pulps of MCP-1(-/-) **mice** and controls were inoculated with six different oral pathogens. In this model the recruitment of leukocytes and the impact of a genetic deletion on the susceptibility to infection can be accurately assessed by measuring the progression of soft tissue necrosis and osteolytic lesion formation. The absence of MCP-1 significantly impaired the recruitment of monocytes, which at later time points was threefold higher in the wild-type **mice** than in MCP-1(-/-) **mice** ($P < 0.05$). The consequence was significantly enhanced rates of soft tissue necrosis and bone resorption ($P < 0.05$). We also determined that the MCP-1(-/-) **mice** were able to recruit polymorphonuclear leukocytes (PMNs) to a similar or greater extent as controls and to produce equivalent levels of Porphyromonas gingivalis-specific total immunoglobulin G (IgG) and IgG1. These results point to the importance of MCP-1 expression and monocyte recruitment in antibacterial defense and demonstrate that antibacterial defense is not due to an indirect effect on PMN recruitment or modulation of the adaptive immune response.

L14 ANSWER 4 OF 9 MEDLINE on STN
ACCESSION NUMBER: 2001675574 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11702043
TITLE: Concurrent assessment of calpain and caspase-3 activation after oxygen-glucose deprivation in primary septo-hippocampal cultures.
AUTHOR: Newcomb-Fernandez J K; Zhao X; Pike B R; Wang K K; Kampfl A; Beer R; DeFord S M; Hayes R L
CORPORATE SOURCE: Department of Neurosurgery, The Vivian L. Smith Center for Neurologic Research, University of Texas Health Science Center, Houston, Texas, USA.
CONTRACT NUMBER: RO1 NS39091 (NINDS)
RO1 NS40182 (NINDS)
SOURCE: Journal of cerebral blood flow and metabolism : official journal of the International Society of Cerebral Blood Flow and Metabolism, (2001 Nov) 21 (11) 1281-94.
Journal code: 8112566. ISSN: 0271-678X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200112
ENTRY DATE: Entered STN: 20011128
Last Updated on STN: 20020123
Entered Medline: 20011218

AB The contributions of calpain and caspase-3 to apoptosis and necrosis after central nervous system (CNS) trauma are relatively unexplored. No study has examined concurrent activation of calpain and caspase-3 in necrotic or apoptotic cell death after any CNS insult. Experiments

used a model of oxygen-glucose deprivation (OGD) in primary septo-hippocampal cultures and assessed cell viability, occurrence of apoptotic and necrotic cell death phenotypes, and protease activation. Immunoblots using an antibody detecting calpain and caspase-3 proteolysis of alpha-spectrin showed greater accumulation of calpain-mediated breakdown products (BDPs) compared with caspase-3-mediated BDPs. Administration of calpain and caspase-3 inhibitors confirmed that activation of these proteases contributed to cell death, as inferred by lactate dehydrogenase release. Oxygen-glucose deprivation resulted in expression of apoptotic and necrotic cell death phenotypes, especially in neurons. Immunocytochemical studies of calpain and caspase-3 activation in apoptotic cells indicated that these proteases are almost always concurrently activated during apoptosis. These data demonstrate that calpain and caspase-3 activation is associated with expression of apoptotic cell death phenotypes after OGD, and that calpain activation, in combination with caspase-3 activation, could contribute to the expression of apoptotic cell death by assisting in the degradation of important cellular **proteins**.

L14 ANSWER 5 OF 9 EMBASE

ACCESSION NUMBER: 2001045357 EMBASE
TITLE: Interleukin-6 deficiency increases inflammatory bone destruction.
AUTHOR: Balto K.; Sasaki H.; Stashenko P.
CORPORATE SOURCE: P. Stashenko, Department of Cytokine Biology, Forsyth Institute, 140 The Fenway, Boston, MA 02115, United States. pstashenko@forsyth.org
SOURCE: Infection and Immunity, (2001) Vol. 69, No. 2, pp. 744-750.
Refs: 49
ISSN: 0019-9567 CODEN: INFIBR
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
005 General Pathology and Pathological Anatomy
026 Immunology, Serology and Transplantation
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20010223
Last Updated on STN: 20010223

AB Periapical bone destruction occurs as a consequence of pulpal infection. In previous studies, we showed that interleukin-1 (IL-1) is the primary stimulator of bone destruction in this model. IL-6 is a pleiotropic cytokine that is induced in these infections and has both pro- and anti-inflammatory activities. In the present study, we determined the role of IL-6 in regulating IL-1 expression and bone resorption. The first molars of IL-6 knockouts (IL-6(-/-)) and wild-type **mice** were subjected to surgical pulp exposure and **infection** with a mixture of four common pulpal pathogens, including Prevotella intermedia, **Fusobacterium** nucleatum, Peptostreptococcus micros, and Streptococcus intermedius. **Mice** were killed after 21 days, and bone destruction and cytokine expression were determined. Surprisingly, bone destruction was significantly increased in IL-6(-/-) **mice** versus that in wild-type **mice** (by 30%; $P < 0.001$). In a second experiment, the effects of chronic (IL-6(-/-)) IL-6 deficiency and short-term IL-6 deficiency induced by in vivo antibody neutralization were determined.

Both IL-6(-/-) (30%; P < 0.001) and anti-IL-6 antibody-treated **mice** (40%; P < 0.05) exhibited increased periapical bone resorption, compared to wild-type controls. The increased bone resorption in IL-6-deficient animals correlated with increases in osteoclast numbers, as well as with elevated expression of bone-resorptive cytokines IL-1α and IL-1β, in periapical lesions and with decreased expression of the anti-inflammatory cytokine IL-10. These data demonstrate that endogenous IL-6 expression has significant anti-inflammatory effects in modulating infection-stimulated bone destruction in vivo.

L14 ANSWER 6 OF 9 MEDLINE on STN
ACCESSION NUMBER: 2000404341 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10899873
TITLE: Toll-like receptor 4-deficient **mice** have reduced bone destruction following mixed anaerobic infection.
AUTHOR: Hou L; Sasaki H; Stashenko P
CORPORATE SOURCE: Department of Cytokine Biology, Forsyth Institute, Boston, Massachusetts 02115, USA.
CONTRACT NUMBER: DE-09018 (NIDCR)
DE-11664 (NIDCR)
SOURCE: Infection and immunity, (2000 Aug) 68 (8) 4681-7. Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200008
ENTRY DATE: Entered STN: 20000901
Last Updated on STN: 20000901
Entered Medline: 20000824

AB C3H/HeJ **mice** have an impaired ability to respond to lipopolysaccharide (LPS) due to a mutation in the gene that encodes Toll-like receptor 4 (TLR4). The effect of TLR4 deficiency on host responses to endodontic infections is unknown. In the present study, we compared periapical bone destruction, sepsis, and inflammatory cytokine production in LPS-hyporesponsive C3H/HeJ and wild-type control C3H/HeOuJ **mice**. The mandibular first molars of both strains were subjected to pulpal exposure and **infection** with a mixture of four anaerobic pathogens, Prevotella intermedia, **Fusobacterium** nucleatum, Streptococcus intermedius, and Peptostreptococcus micros. At sacrifice on day 21, TLR4-deficient C3H/HeJ **mice** had significantly reduced periapical bone destruction compared to wild-type C3H/HeOuJ **mice** (P < 0.001). The decreased bone destruction in C3H/HeJ correlated with reduced expression of the bone resorptive cytokines interleukin 1alpha (IL-1alpha) (P < 0.01) and IL-1beta (P < 0.05) as well as the proinflammatory cytokine IL-12 (P < 0.05). No significant differences were seen in the levels of gamma interferon, tumor necrosis factor alpha (TNF-alpha), or IL-10 between the two strains. The expression of IL-1alpha, IL-1beta, TNF-alpha, IL-10, and IL-12 were all significantly reduced in vitro in macrophages from both TLR4-deficient C3H/HeJ and C57BL/10ScNCr strains, compared to wild-type controls. Notably, the responses of TLR4-deficient macrophages to both gram-positive and gram-negative bacteria were similarly reduced. Neither C3H/HeJ nor C3H/HeOuJ **mice** exhibited orofacial abscess development or infection dissemination as determined by splenomegaly or cachexia. We conclude that intact TLR function

mediates increased proinflammatory responses and bone destruction in response to mixed anaerobic infections.

L14 ANSWER 7 OF 9 MEDLINE on STN
ACCESSION NUMBER: 97427964 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9284152
TITLE: Increased susceptibility of RAG-2 SCID **mice** to dissemination of endodontic infections.
AUTHOR: Teles R; Wang C Y; Stashenko P
CORPORATE SOURCE: Department of Cytokine Biology, Forsyth Dental Center, Boston, Massachusetts 02115, USA.. rteles@forsyth.org
CONTRACT NUMBER: DE-11664 (NIDCR)
SOURCE: Infection and immunity, (1997 Sep) 65 (9) 3781-7. Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199709
ENTRY DATE: Entered STN: 19971008
Last Updated on STN: 20000303
Entered Medline: 19970919

AB Specific immunity has been implicated in the pathogenesis of periapical lesions, although the extent to which these mechanisms are actually involved in either protection or destruction of the pulp-periapex complex is yet to be established. To investigate this question we compared periapical-lesion pathogenesis in RAG-2 severe combined immunodeficient (SCID) **mice** with immunocompetent control **mice** following surgical pulp exposure. In order to equalize the bacterial challenge, an **infection** protocol using Prevotella intermedia, **Fusobacterium** nucleatum, Peptostreptococcus micros, and Streptococcus intermedius was devised. The results demonstrated that after infection, the proportion of the root canal flora represented by the four pathogens was almost identical in both groups (39.9 and 42.2% for RAG-2 and immunocompetent control **mice**, respectively). The effects of abrogation of T- and B-cell mechanisms on periapical pathogenesis were then assessed. Approximately one-third of the RAG-2 **mice** developed endodontic abscesses, while no immunocompetent controls had abscesses, results which indicated regional dissemination of the infection. A similar incidence of abscesses was found in two additional experiments. Abscessed RAG-2 teeth had significantly larger periapical lesions than did nonabscessed RAG-2 teeth ($P < or = 0.05$) and exposed immunocompetent controls ($P < or = 0.01$), whereas nonabscessed RAG-2 teeth were not significantly different from those of exposed immunocompetent controls in periapical-lesion size. We conclude that B- and T-cell-mediated immunity protects the host from the dissemination of endodontic infections and that RAG-2 **mice** are more susceptible to infection-induced pulp-periapex destruction.

L14 ANSWER 8 OF 9 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 97281243 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9135551
TITLE: Increase of heat-shock **protein** and induction of gamma/delta T cells in peritoneal exudate of **mice** after injection of live Fusobacterium nucleatum.
AUTHOR: Saito K; Katsuragi H; Mikami M; Kato C; Miyamaru M; Nagaso K

Searcher : Shears 571-272-2528

CORPORATE SOURCE: Department of Oral Microbiology, School of Dentistry at Niigata, Nippon Dental University, Japan.
SOURCE: Immunology, (1997 Feb) 90 (2) 229-35.
Journal code: 0374672. ISSN: 0019-2805.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199705
ENTRY DATE: Entered STN: 19970602
Last Updated on STN: 19970602
Entered Medline: 19970516

AB Fusobacterium nucleatum and Actinobacillus actinomycetemcomitans are Gram-negative rod periodontal pathogens. The peritoneal cavity of Institute of Cancer Research (ICR) **mice** was used as the local infection model. In vivo production of heat-shock **proteins** (hsp) was studied by injection of 1/10 minimum lethal dose (MLD) of each live bacteria into **mice**. Heat-shock **proteins** 70 and 60 were examined in the extract of peritoneal exudate cells (PEC) from **mice** injected intraperitoneally with either F. nucleatum or A. actinomycetemcomitans by using sodium dodecylsulphate-polyacrylamide gel electrophoresis and immunoblotting analysis. Although hsp are present in PEC without injection of the bacteria, both hsp increased and reached a peak on day 3 after F. nucleatum injection but not after A. actinomycetemcomitans. Kinetic study of gamma/delta cells in PEC after injection of bacteria showed that the increase of gamma/delta T cells was observed only in the PEC from **mice** injected with F. nucleatum but not A. actinomycetemcomitans. The gamma/delta T cells in PEC were either CD3+ and CD4+ or CD3+ and CD8+. The differential cell count of PEC suggested that gamma/delta T-cell induction is related to the expansion of the macrophage population. The phagocytic and chemiluminescence responses of macrophages against the same bacteria were compared after intensive immunization with live F. nucleatum and A. actinomycetemcomitans. Elevations of chemiluminescence response and phagocytic function by immunization were observed in the macrophages of **mice** immunized with F. nucleatum. These results suggest the sequential appearance of hsp, gamma/delta T cells and macrophage activation after **fusobacterial infection**.

L14 ANSWER 9 OF 9 VETU COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 1996-62589 VETU
TITLE: Pore-forming **proteins** - immunogenic components in veterinary vaccines.
AUTHOR: Supotnitsky M V
CORPORATE SOURCE: Vyatsky-State-Agr.Acad.
LOCATION: Russia
SOURCE: Veterinariy (Moscow) (1996, No. 4, 19-24) 1 Tab. 31 Ref.
CODEN: VETNAL
AVAIL. OF DOC.: No Reprint Address.
LANGUAGE: Russian
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
AN 1996-62589 VETU
AB A review of pore-forming **proteins** (porins) from pathogenic bacteria and their applications in vaccines for veterinary use, is presented.The porins have advantages over other bacterial cell antigens, e.g. high immunogenicity and species specificity with

regard to the immune response in animals, predominantly cellular immunity (which is particularly important in prophylaxis of diseases caused by Gram-negative organisms). These antigens also possess the capacity to protect against aerogenic infections without the need for use of adjuvants. Immune sera obtained using porins have shown excellent protective properties and the introduction of recent biotechnology has resulted in production of effective porin-based vaccines.

ABEX Studies of porins from various bacteria are presented: Haemophilus influenzae B (HiB), Salm. typhimurium, Neisseria meningitidis and gonorrhoeae, Ps. aeruginosa, mallei and pseudomallei, Legionella pneumophila and Yersinia pseudotuberculosis. The protective properties of porins, the species specificity, the predominantly cellular immunity, the relation of the immune response to the conformation of the antigen and the polyepitope nature of the porins are discussed. Studies have shown that adjuvants (e.g. Freund's adjuvant) do not increase the immune response to porins or alternatively can lower the response (in the case of aluminum hydroxide gel). Studies with the porins from L. pneumophila and Ps. aeruginosa have demonstrated that they provide protection against respiratory infections due to these pathogens in immunized guinea pigs. Immune sera obtained from **mice** stimulated with porins from Salm. typhimurium have provided protection against experimental infection with this agent some 20-30 times higher than that obtained with sera from intact animals. The porins from Shigella flexneri and sonnei have provided protection against keratoconjunctivitis due to nonhomologous strains of the pathogens in guinea pigs and rabbits. Studies are cited of the preparation of vaccines based on porins for testing against pathogens of glanders, melioidosis, **necrobacillosis** and dysentery in farm animals and also against certain pathogenic serotypes (e.g. listeriosis, campylobacteriosis,, pseudotuberculosis, salmonellosis and pseudomonal infections). Other porin containing vaccines have been tested for protection against aerogenic infections (pasteurellosis, Haemophilus pleuropneumoniae and Haemophilus swine polyserositis). Routes to the construction of porin based vaccines and the legal aspects of commercially developed vaccines of this type are also discussed.

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FILE COVERS 1971 TO PATENT PUBLICATION DATE: 8 Dec 2005 (20051208/PD)
FILE LAST UPDATED: 8 Dec 2005 (20051208/ED)
HIGHEST GRANTED PATENT NUMBER: US6973671
HIGHEST APPLICATION PUBLICATION NUMBER: US2005273898
CA INDEXING IS CURRENT THROUGH 8 Dec 2005 (20051208/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 8 Dec 2005 (20051208/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Oct 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Oct 2005

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L1	294	SEA FILE=CAPLUS ABB=ON PLU=ON (FUSOBACTER? OR F OR SPHAEROPH? OR S)(W)NECROPHOR?
L8	154	SEA FILE=CAPLUS ABB=ON PLU=ON (FUSOBACTER? OR SPHAEROPHOR ?)(S)INFECTION OR NECROBACILLOSIS
L22	41	SEA FILE=USPATFULL ABB=ON PLU=ON (L1 OR L8)(S)((MUS OR M)(W)(DOMESTIC? OR MUSCULUS) OR MICE OR MOUSE OR RAT OR RODENT)
L24	30	SEA FILE=USPATFULL ABB=ON PLU=ON L22(L)(POLYPEPTIDE OR PEPTIDE OR PROTEIN OR POLYPROTEIN)
L25	26	SEA FILE=USPATFULL ABB=ON PLU=ON L24(L)((NUCLEOTIDE OR NUCLEIC OR DNA OR DEOXYRIBONUCLEIC OR DEOXY RIBONUCLEIC)(S) RECOMBINANT?)

L25 ANSWER 1 OF 26 USPATFULL on STN

ACCESSION NUMBER:	2005:305783 USPATFULL
TITLE:	Fluoroalkoxy, nucleosides, nucleotides, and polynucleotides
INVENTOR(S):	Vagle, Kurt, Longmont, CO, UNITED STATES Vargeese, Chandra, Broomfield, CO, UNITED STATES Chen, Tongqian, Longmont, CO, UNITED STATES
PATENT ASSIGNEE(S):	Sirna Therapeutics, Inc., Boulder, CO, UNITED STATES (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005266422	A1	20051201
APPLICATION INFO.:	US 2004-981966	A1	20041105 (10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2004-923536, filed on 20 Aug 2004, PENDING Continuation-in-part of Ser. No. WO 2003-US5346, filed on 20 Feb 2003, PENDING Continuation-in-part of Ser. No. WO 2003-US5028, filed on 20 Feb 2003, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-358580P	20020220 (60)
	US 2002-358580P	20020220 (60)
	US 2002-363124P	20020311 (60)
	US 2002-363124P	20020311 (60)
	US 2002-386782P	20020606 (60)
	US 2002-386782P	20020606 (60)
	US 2002-406784P	20020829 (60)
	US 2002-406784P	20020829 (60)
	US 2002-408378P	20020905 (60)

Searcher : Shears 571-272-2528

	US 2002-408378P	20020905 (60)
	US 2002-409293P	20020909 (60)
	US 2002-409293P	20020909 (60)
	US 2003-440129P	20030115 (60)
	US 2003-440129P	20030115 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP, 300 S. WACKER DRIVE, 32ND FLOOR, CHICAGO, IL, 60606, US
NUMBER OF CLAIMS: 32
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 21 Drawing Page(s)
LINE COUNT: 6689

AB The present invention related to fluoroalkoxy ("--OCF3") nucleosides, nucleotides, and polynucleotides comprising fluoroalkoxy nucleotides. The present invention also relates to methods of synthesizing fluoroalkoxy nucleosides, nucleotides, and polynucleotides comprising fluoroalkoxy nucleotides. The present invention also relates to compounds, compositions, and methods for the study, diagnosis, and treatment of traits, diseases and conditions that respond to the modulation of gene expression and/or activity. The invention also relates to fluoroalkoxy modified nucleic acid molecules, such as ribozymes, antisense, aptamers, decoys, triplex forming oligonucleotides (TFO), immune stimulatory oligonucleotides (ISO), immune modulatory oligonucleotides (IMO), and small nucleic acid molecules, including short interfering nucleic acid (siNA), short interfering RNA (siRNA), double-stranded RNA (dsRNA), micro-RNA (miRNA), and short hairpin RNA (shRNA) molecules capable of mediating RNA interference (RNAi) against polynucloetide targets. Such small nucleic acid molecules are useful, for example, in providing compositions to treat, prevent, inhibit, or reduce diseases, traits, or conditions in a subject or organism.

L25 ANSWER 2 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2005:281512 USPATFULL
TITLE: Use of topoisomerase inhibitors and heat shock protein 90 inhibitors for use in chemotherapy
INVENTOR(S): Jenkins, John, Liverpool, UNITED KINGDOM
PATENT ASSIGNEE(S): THE UNIVERSITY OF LIVERPOOL, Liverpool, UNITED KINGDOM (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2005245466	A1	20051103	
APPLICATION INFO.:	US 2003-509143	A1	20030328	(10)
	WO 2003-GB1369		20030328	
			20050715	PCT 371 date

	NUMBER	DATE
PRIORITY INFORMATION:	GB 2003-207362	20020328

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: PILLSBURY WINTHROP SHAW PITTMAN LLP, 725 S. FIGUEROA STREET, SUITE 2800, LOS ANGELES, CA, 90017, US
NUMBER OF CLAIMS: 33

EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 20 Drawing Page(s)
LINE COUNT: 1662
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to the use of a first agent that attenuates topoisomerase II (Topo II) activity and a second agent that inhibits Heat Shock Protein 90 (HSP90) for use in chemotherapy. The agents are particularly useful in the treatment of cancer and destruction of micro-organisms. The invention also relates to screening methods, diagnostic methods and methods for evaluating or monitoring chemotherapy regimens.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 3 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2005:226917 USPATFULL
TITLE: RNA interference mediated inhibition of GRB2 associated binding protein (GAB2) gene expression using short interfering nucleic acis (siNA)
INVENTOR(S): McSwiggen, James, Boulder, CO, UNITED STATES
Beigelman, Leonid, Longmont, CO, UNITED STATES
Usman, Nassim, Lafayette, CO, UNITED STATES
PATENT ASSIGNEE(S): Sirna Therapeutics, Inc., Boulder, CO, UNITED STATES (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005196767	A1	20050908
APPLICATION INFO.:	US 2004-923380	A1	20040820 (10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 2003-US4909, filed on 18 Feb 2003, PENDING Continuation-in-part of Ser. No. WO 2004-US16390, filed on 24 May 2004, PENDING Continuation-in-part of Ser. No. US 2004-826966, filed on 16 Apr 2004, PENDING Continuation-in-part of Ser. No. US 2004-757803, filed on 14 Jan 2004, PENDING Continuation-in-part of Ser. No. US 2003-720448, filed on 24 Nov 2003, PENDING Continuation-in-part of Ser. No. US 2003-693059, filed on 23 Oct 2003, PENDING Continuation-in-part of Ser. No. US 2003-444853, filed on 23 May 2003, PENDING Continuation-in-part of Ser. No. WO 2003-US5346, filed on 20 Feb 2003, PENDING Continuation-in-part of Ser. No. WO 2003-US5028, filed on 20 Feb 2003, PENDING Continuation-in-part of Ser. No. WO 2004-US13456, filed on 30 Apr 2004, PENDING Continuation-in-part of Ser. No. US 2004-780447, filed on 13 Feb 2004, PENDING Continuation-in-part of Ser. No. US 2003-427160, filed on 30 Apr 2003, PENDING Continuation-in-part of Ser. No. WO 2002-US15876, filed on 17 May 2002, PENDING Continuation-in-part of Ser. No. US 2003-727780, filed on 3 Dec 2003, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-358580P	20020220 (60)
	US 2002-358580P	20020220 (60)
	US 2002-363124P	20020311 (60)

Searcher : Shears 571-272-2528

	US 2002-363124P	20020311 (60)
	US 2002-386782P	20020606 (60)
	US 2002-386782P	20020606 (60)
	US 2002-406784P	20020829 (60)
	US 2002-406784P	20020829 (60)
	US 2002-408378P	20020905 (60)
	US 2002-408378P	20020905 (60)
	US 2002-409293P	20020909 (60)
	US 2002-409293P	20020909 (60)
	US 2003-440129P	20030115 (60)
	US 2003-440129P	20030115 (60)
	US 2001-292217P	20010518 (60)
	US 2002-362016P	20020306 (60)
	US 2001-306883P	20010720 (60)
	US 2001-311865P	20010813 (60)
	US 2004-543480P	20040210 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP, 300 S. WACKER DRIVE, 32ND FLOOR, CHICAGO, IL, 60606, US
NUMBER OF CLAIMS: 35
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 25 Drawing Page(s)
LINE COUNT: 7321
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to compounds, compositions, and methods useful for modulating GRB2 associated binding protein (GAB2) gene expression using short interfering nucleic acid (siNA) molecules. This invention also relates to compounds, compositions, and methods useful for modulating the expression and activity of other genes involved in pathways of GRB2 associated binding protein (GAB2) gene expression and/or activity by RNA interference (RNAi) using small nucleic acid molecules. In particular, the instant invention features small nucleic acid molecules, such as short interfering nucleic acid (siNA), short interfering RNA (siRNA), double-stranded RNA (dsRNA), micro-RNA (mRNA), and short hairpin RNA (shRNA) molecules and methods used to modulate the expression of GAB2 genes. The small nucleic acid molecules are useful in the treatment of cancer, malignant blood disease (leukemia), inflammatory diseases or conditions, allergic diseases or conditions, or proliferative diseases or conditions.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 4 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2005:209525 USPATFULL
TITLE: RNA interference mediated inhibition of NF-Kappa B / REL-A gene expression using short interfering nucleic acid (siNA)
INVENTOR(S): McSwiggen, James, Boulder, CO, UNITED STATES
Beigelman, Leonid, Longmont, CO, UNITED STATES
PATENT ASSIGNEE(S): Sirna Therapeutics, Inc., Boulder, CO, UNITED STATES (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005182009	A1	20050818
APPLICATION INFO.:	US 2004-923201	A1	20040820 (10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 2003-US4951,

filed on 20 Feb 2003, PENDING Continuation-in-part of Ser. No. WO 2004-US16390, filed on 24 May 2004, PENDING Continuation-in-part of Ser. No. US 2004-826966, filed on 16 Apr 2004, PENDING Continuation-in-part of Ser. No. US 2004-757803, filed on 14 Jan 2004, PENDING Continuation-in-part of Ser. No. US 2003-720448, filed on 24 Nov 2003, PENDING Continuation-in-part of Ser. No. US 2003-693059, filed on 23 Oct 2003, PENDING Continuation-in-part of Ser. No. US 2003-444853, filed on 23 May 2003, PENDING Continuation-in-part of Ser. No. WO 2003-US5346, filed on 20 Feb 2003, PENDING Continuation-in-part of Ser. No. WO 2003-US5028, filed on 20 Feb 2003, PENDING Continuation-in-part of Ser. No. WO 2004-US13456, filed on 30 Apr 2004, PENDING Continuation-in-part of Ser. No. US 2004-780447, filed on 13 Feb 2004, PENDING Continuation-in-part of Ser. No. US 2003-427160, filed on 30 Apr 2003, PENDING Continuation-in-part of Ser. No. WO 2002-US15876, filed on 17 May 2002, PENDING Continuation-in-part of Ser. No. US 2003-727780, filed on 3 Dec 2003, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-358580P	20020220 (60)
	US 2002-358580P	20020220 (60)
	US 2002-363124P	20020311 (60)
	US 2002-363124P	20020311 (60)
	US 2002-386782P	20020606 (60)
	US 2002-386782P	20020606 (60)
	US 2002-406784P	20020829 (60)
	US 2002-406784P	20020829 (60)
	US 2002-408378P	20020905 (60)
	US 2002-408378P	20020905 (60)
	US 2002-409293P	20020909 (60)
	US 2002-409293P	20020909 (60)
	US 2003-440129P	20030115 (60)
	US 2003-440129P	20030115 (60)
	US 2001-292217P	20010518 (60)
	US 2002-362016P	20020306 (60)
	US 2001-306883P	20010720 (60)
	US 2001-311865P	20010813 (60)
	US 2004-543480P	20040210 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP, 300 S. WACKER DRIVE, 32ND FLOOR, CHICAGO, IL, 60606, US
NUMBER OF CLAIMS: 35
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 25 Drawing Page(s)
LINE COUNT: 9508
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to compounds, compositions, and methods useful for modulating NF-kappa B, REL-A, REL-B, REL, NKkappaB1, or NFkappaB2 gene expression using short interfering nucleic acid (siNA) molecules. This invention also relates to compounds, compositions, and methods useful for modulating the expression and

activity of other genes involved in pathways of NF-kappa B, REL-A, REL-B, REL, NKkappaB1, or NFkappaB2 gene expression and/or activity by RNA interference (RNAi) using small nucleic acid molecules. In particular, the instant invention features small nucleic acid molecules, such as short interfering nucleic acid (siNA), short interfering RNA (siRNA), double-stranded RNA (dsRNA), micro-RNA (mRNA), and short hairpin RNA (shRNA) molecules and methods used to modulate the expression of NF-kappa B, REL-A, REL-B, REL, NKkappaB1, or NFkappaB2 genes, such as NF-kappa B and/or REL-A.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 5 OF 26 USPATFULL on STN

ACCESSION NUMBER: 2005:202606 USPATFULL

TITLE: RNA interference mediated inhibition of B-cell CLL/Lymphoma-2 (BCL-2) gene expression using short interfering nucleic acid (siNA)

INVENTOR(S): McSwiggen, James, Boulder, CO, UNITED STATES
Beigelman, Leonid, Longmont, CO, UNITED STATES

PATENT ASSIGNEE(S): Sirna Therapeutics, Inc., Boulder, CO, UNITED STATES (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005176025	A1	20050811
APPLICATION INFO.:	US 2004-923516	A1	20040820 (10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 2003-US4908, filed on 18 Feb 2003, PENDING Continuation-in-part of Ser. No. WO 2004-US16390, filed on 24 May 2004, PENDING Continuation-in-part of Ser. No. US 2004-826966, filed on 16 Apr 2004, PENDING Continuation-in-part of Ser. No. US 2004-757803, filed on 14 Jan 2004, PENDING Continuation-in-part of Ser. No. US 2003-720448, filed on 24 Nov 2003, PENDING Continuation-in-part of Ser. No. US 2003-693059, filed on 23 Oct 2003, PENDING Continuation-in-part of Ser. No. US 2003-444853, filed on 23 May 2003, PENDING Continuation-in-part of Ser. No. WO 2003-US5346, filed on 20 Feb 2003, PENDING Continuation-in-part of Ser. No. WO 2003-US5028, filed on 20 Feb 2003, PENDING Continuation-in-part of Ser. No. WO 2004-US13456, filed on 30 Apr 2004, PENDING Continuation-in-part of Ser. No. US 2004-780447, filed on 13 Feb 2004, PENDING Continuation-in-part of Ser. No. US 2003-427160, filed on 30 Apr 2003, PENDING Continuation-in-part of Ser. No. WO 2002-US15876, filed on 17 May 2002, PENDING Continuation-in-part of Ser. No. US 2003-727780, filed on 3 Dec 2003, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-396905P	20020718 (60)
	US 2002-358580P	20020220 (60)
	US 2002-358580P	20020220 (60)
	US 2002-363124P	20020311 (60)
	US 2002-363124P	20020311 (60)
	US 2002-386782P	20020606 (60)

Searcher : Shears 571-272-2528

	US 2002-386782P	20020606 (60)
	US 2002-406784P	20020829 (60)
	US 2002-406784P	20020829 (60)
	US 2002-408378P	20020905 (60)
	US 2002-408378P	20020905 (60)
	US 2002-409293P	20020909 (60)
	US 2002-409293P	20020909 (60)
	US 2003-440129P	20030115 (60)
	US 2003-440129P	20030115 (60)
	US 2001-292217P	20010518 (60)
	US 2002-362016P	20020306 (60)
	US 2001-306883P	20010720 (60)
	US 2001-311865P	20010813 (60)
	US 2004-543480P	20040210 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP, 300 S. WACKER DRIVE, 32ND FLOOR, CHICAGO, IL, 60606, US	
NUMBER OF CLAIMS:	35	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	25 Drawing Page(s)	
LINE COUNT:	11799	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to compounds, compositions, and methods useful for modulating BCL2 gene expression using short interfering nucleic acid (siNA) molecules. This invention also relates to compounds, compositions, and methods useful for modulating the expression and activity of other genes involved in pathways of BCL2 gene expression and/or activity by RNA interference (RNAi) using small nucleic acid molecules. In particular, the instant invention features small nucleic acid molecules, such as short interfering nucleic acid (siNA), short interfering RNA (siRNA), double-stranded RNA (dsRNA), micro-RNA (miRNA), and short hairpin RNA (shRNA) molecules and methods used to modulate the expression of BCL2 genes (e.g., BCL2, BCL-XL, BCL2-L1, MCL-1 CED-9, BAG-1, E1B-194 and/or BCL-A1). The small nucleic acid molecules are useful in the treatment of cancer, malignant blood disease, polycytemia vera, idiopathic myelofibrosis, essential thrombocythemia, myelodysplastic syndromes, autoimmune disease, viral infection, and proliferative diseases and conditions

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 6 OF 26 USPATFULL on STN

ACCESSION NUMBER:	2005:177835 USPATFULL
TITLE:	RNA interference mediated inhibition of telomerase gene expression using short interfering nucleic acid (siNA)
INVENTOR(S):	McSwiggen, James, Boulder, CO, UNITED STATES Beigelman, Leonid, Longmont, CO, UNITED STATES
PATENT ASSIGNEE(S):	Sirna Therapeutics, Inc., Boulder, CO, UNITED STATES (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005153916	A1	20050714
APPLICATION INFO.:	US 2004-923330	A1	20040820 (10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 2003-US4088, filed on 11 Feb 2003, PENDING Continuation-in-part

of Ser. No. WO 2004-US16390, filed on 24 May 2004, PENDING Continuation-in-part of Ser. No. US 2004-826966, filed on 16 Apr 2004, PENDING Continuation-in-part of Ser. No. US 2004-757803, filed on 14 Jan 2004, PENDING Continuation-in-part of Ser. No. US 2003-720448, filed on 24 Nov 2003, PENDING Continuation-in-part of Ser. No. US 2003-693059, filed on 23 Oct 2003, PENDING Continuation-in-part of Ser. No. US 2003-444853, filed on 23 May 2003, PENDING Continuation-in-part of Ser. No. WO 2003-US5346, filed on 20 Feb 2003, PENDING Continuation-in-part of Ser. No. WO 2003-US5028, filed on 20 Feb 2003, PENDING Continuation-in-part of Ser. No. WO 2004-US13456, filed on 30 Apr 2004, PENDING Continuation-in-part of Ser. No. US 2004-780447, filed on 13 Feb 2004, PENDING Continuation-in-part of Ser. No. US 2003-427160, filed on 30 Apr 2003, PENDING Continuation-in-part of Ser. No. WO 2002-US15876, filed on 17 May 2002, PENDING Continuation-in-part of Ser. No. US 2003-727780, filed on 3 Dec 2003, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-396600P	20020717 (60)
	US 2002-358580P	20020220 (60)
	US 2002-358580P	20020220 (60)
	US 2002-363124P	20020311 (60)
	US 2002-363124P	20020311 (60)
	US 2002-386782P	20020606 (60)
	US 2002-386782P	20020606 (60)
	US 2002-406784P	20020829 (60)
	US 2002-406784P	20020829 (60)
	US 2002-408378P	20020905 (60)
	US 2002-408378P	20020905 (60)
	US 2002-409293P	20020909 (60)
	US 2002-409293P	20020909 (60)
	US 2003-440129P	20030115 (60)
	US 2003-440129P	20030115 (60)
	US 2001-292217P	20010518 (60)
	US 2002-362016P	20020306 (60)
	US 2001-306883P	20010720 (60)
	US 2001-311865P	20010813 (60)
	US 2004-543480P	20040210 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP, 300 S. WACKER DRIVE, 32ND FLOOR, CHICAGO, IL, 60606, US
NUMBER OF CLAIMS: 37
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 25 Drawing Page(s)
LINE COUNT: 11489
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to compounds, compositions, and methods useful for modulating telomerase gene expression using short interfering nucleic acid (siNA) molecules. This invention also relates to compounds, compositions, and methods useful for modulating the expression and activity of other genes involved in

pathways of telomerase gene expression and/or activity by RNA interference (RNAi) using small nucleic acid molecules. In particular, the instant invention features small nucleic acid molecules, such as short interfering nucleic acid (siNA), short interfering RNA (siRNA), double-stranded RNA (dsRNA), micro-RNA (miRNA), and short hairpin RNA (shRNA) molecules and methods used to modulate the expression of telomerase genes, such as telomerase template RNA (TERC/TR), or a telomerase protein (TERT).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 7 OF 26 USPATFULL on STN

ACCESSION NUMBER: 2005:165908 USPATFULL

TITLE: RNA interference mediated inhibition of interleukin and interleukin receptor gene expression using short interfering nucleic acid (SINA)

INVENTOR(S): Richards, Ivan, Kalamazoo, MI, UNITED STATES
Polisky, Barry, Boulder, CO, UNITED STATES
McSwiggen, James, Boulder, CO, UNITED STATES

PATENT ASSIGNEE(S): Sirna Therapeutics, Inc., Boulder, CO, UNITED STATES (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005143333	A1	20050630
APPLICATION INFO.:	US 2004-863973	A1	20040609 (10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 2003-US4566, filed on 14 Feb 2003, PENDING Continuation-in-part of Ser. No. WO 2004-US16390, filed on 24 May 2004, PENDING Continuation-in-part of Ser. No. US 2004-826966, filed on 16 Apr 2004, PENDING Continuation-in-part of Ser. No. US 2004-757803, filed on 14 Jan 2004, PENDING Continuation-in-part of Ser. No. US 2003-720448, filed on 24 Nov 2003, PENDING Continuation-in-part of Ser. No. US 2003-693059, filed on 23 Oct 2003, PENDING Continuation-in-part of Ser. No. US 2003-444853, filed on 23 May 2003, PENDING Continuation-in-part of Ser. No. WO 2003-US5346, filed on 20 Feb 2003, PENDING Continuation-in-part of Ser. No. WO 2003-US5028, filed on 20 Feb 2003, PENDING Continuation-in-part of Ser. No. WO 2004-US13456, filed on 30 Apr 2004, PENDING Continuation-in-part of Ser. No. US 2004-780447, filed on 13 Feb 2004, PENDING Continuation-in-part of Ser. No. US 2003-427160, filed on 30 Apr 2003, PENDING Continuation-in-part of Ser. No. WO 2002-US15876, filed on 17 May 2002, PENDING Continuation-in-part of Ser. No. US 2003-727780, filed on 3 Dec 2003, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-358580P	20020220 (60)
	US 2002-358580P	20020220 (60)
	US 2002-363124P	20020311 (60)
	US 2002-363124P	20020311 (60)
	US 2002-386782P	20020606 (60)
	US 2002-386782P	20020606 (60)

	US 2002-406784P	20020829 (60)
	US 2002-406784P	20020829 (60)
	US 2002-408378P	20020905 (60)
	US 2002-408378P	20020905 (60)
	US 2002-409293P	20020909 (60)
	US 2002-409293P	20020909 (60)
	US 2003-440129P	20030115 (60)
	US 2003-440129P	20030115 (60)
	US 2002-362016P	20020306 (60)
	US 2001-292217P	20010518 (60)
	US 2001-306883P	20010720 (60)
	US 2001-311865P	20010813 (60)
	US 2004-543480P	20040210 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP, 300 S. WACKER DRIVE, 32ND FLOOR, CHICAGO, IL, 60606, US
NUMBER OF CLAIMS: 35
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 25 Drawing Page(s)
LINE COUNT: 9708
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to compounds, compositions, and methods useful for modulating interleukin and/or interleukin receptor gene expression using short interfering nucleic acid (siNA) molecules. This invention also relates to compounds, compositions, and methods useful for modulating the expression and activity of other genes involved in pathways of interleukin and/or interleukin receptor gene expression and/or activity by RNA interference (RNAi) using small nucleic acid molecules. In particular, the instant invention features small nucleic acid molecules, such as short interfering nucleic acid (siNA), short interfering RNA (siRNA), double-stranded RNA (dsRNA), micro-RNA (mRNA), and short hairpin RNA (shRNA) molecules and methods used to modulate the expression of interleukin and/or interleukin receptor genes such as IL-1, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11, IL-12, IL-13, IL-14, IL-15, IL-16, IL-17, IL-18, IL-19, IL-20, IL-21, IL-22, IL-23, IL-24, IL-25, IL-26, and IL-27 genes and IL-IR, IL-2R, IL-3R, IL-4R, IL-5R, IL-6R, IL-7R, IL-8R, IL-9R, IL-10R, IL-11R, IL-12R, IL-13R, IL-14R, IL-15R, IL-16R, IL-17R, IL-18R, IL-19R, IL-20R, IL-21R, IL-22R, IL-23R, IL-24R, IL-25R, IL-26R, and IL-27R genes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 8 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2005:140310 USPATFULL
TITLE: Therapeutic treatment and prevention of infections with a bioactive material(s) encapuslated within a biodegradable-bio-compatable polymeric matrix
INVENTOR(S): Setterstrom, Jean A., Alpharetta, GA, UNITED STATES
Tice, Thomas R., Birmingham, AL, UNITED STATES
Jacob, Elliot, Silver Spring, MD, UNITED STATES
Reid, Robert H., Kensington, MD, UNITED STATES
van Hamont, John, West Point, NY, UNITED STATES
Boedecker, Edgar C., Crownsville, MD, UNITED STATES
Jeyanthi, Ramassubbu, Columbia, MD, UNITED STATES
Friden, Phil, Bedford, MA, UNITED STATES
Roberts, F. Donald, Dover, MA, UNITED STATES
McQueen, Charles E., Olney, MD, UNITED STATES

Bhattacharjee, Apurba, Kensington, MD, UNITED STATES
Cross, Alan, Chevy Chase, MD, UNITED STATES
Sadoff, Jerald, Washington, DC, UNITED STATES
Zollinger, Wendell, Silver Spring, MD, UNITED STATES(4)
PATENT ASSIGNEE(S): The United States of America as represented by the Secretary of the Army, Washington, DC, UNITED STATES (U.S. government)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6902743	B1	20050607
APPLICATION INFO.:	US 1998-55505		19980406 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1997-920326, filed on 21 Aug 1997, Pat. No. US 6447796 Continuation-in-part of Ser. No. US 1997-896197, filed on 17 Jul 1997, ABANDONED Continuation-in-part of Ser. No. US 1997-788734, filed on 23 Jan 1997, Pat. No. US 5892337 Continuation-in-part of Ser. No. US 1996-698896, filed on 16 Aug 1996, Pat. No. US 5705197 Continuation-in-part of Ser. No. US 1996-675895, filed on 5 Jul 1996, Pat. No. US 6217911 Continuation-in-part of Ser. No. US 1996-598874, filed on 9 Feb 1996, Pat. No. US 5762965 Continuation-in-part of Ser. No. US 1996-590973, filed on 24 Jan 1996, ABANDONED Continuation of Ser. No. US 1995-446149, filed on 22 May 1995, ABANDONED Continuation-in-part of Ser. No. US 1995-446148, filed on 22 May 1995, Pat. No. US 6410056
DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Criares, Theodore J.
LEGAL REPRESENTATIVE: Arwine, Elizabeth, Moran, John Francis, Harris, Charles H.
NUMBER OF CLAIMS: 154
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 88 Drawing Figure(s); 86 Drawing Page(s)
LINE COUNT: 7899
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Novel burst-free, sustained release biocompatible and biodegrable microcapsules which can be programmed to release their active core for variable durations ranging from 1-100 days in an aqueous physiological environment. The microcapsules are comprised of a core of polypeptide or other biologically active agent encapsulated in a matrix of poly(lactide/glycolide) copolymer having a molar composition of lactide/glycolide from 90/10 to 40/60, which may contain a pharmaceutically-acceptable adjuvant, as a blend of uncapped free carboxyl end group and end-capped forms ranging to ratios from 100/0 to 1/99.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 9 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2005:138562 USPATFULL
TITLE: RNA interference mediated inhibition of FAS and FASL gene expression using short interfering

Text 2

nucleic acid (siNA)

INVENTOR(S): Haeberli, Peter, Berhoud, CO, UNITED STATES
McSwiggen, James, Boulder, CO, UNITED STATES
PATENT ASSIGNEE(S): Sirna Therapeutics, Inc., Boulder, CO, UNITED STATES, 80301 (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005119212	A1	20050602
APPLICATION INFO.:	US 2004-871222	A1	20040618 (10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 2004-US16390, filed on 24 May 2004, PENDING Continuation-in-part of Ser. No. US 2004-826966, filed on 16 Apr 2004, PENDING Continuation-in-part of Ser. No. US 2004-757803, filed on 14 Jan 2004, PENDING Continuation-in-part of Ser. No. US 2003-720448, filed on 24 Nov 2003, PENDING Continuation-in-part of Ser. No. US 2003-693059, filed on 23 Oct 2003, PENDING Continuation-in-part of Ser. No. US 2003-444853, filed on 23 May 2003, PENDING Continuation-in-part of Ser. No. WO 2003-US5346, filed on 20 Feb 2003, PENDING Continuation-in-part of Ser. No. WO 2003-US5028, filed on 20 Feb 2003, PENDING Continuation-in-part of Ser. No. WO 2004-US13456, filed on 30 Apr 2004, PENDING Continuation of Ser. No. US 2004-780447, filed on 13 Feb 2004, PENDING Continuation of Ser. No. US 2003-427160, filed on 30 Apr 2003, PENDING Continuation-in-part of Ser. No. WO 2002-US15876, filed on 17 May 2002, PENDING Continuation-in-part of Ser. No. US 2003-727780, filed on 3 Dec 2003, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-358580P	20020220 (60)
	US 2002-358580P	20020220 (60)
	US 2002-363124P	20020311 (60)
	US 2002-363124P	20020311 (60)
	US 2002-386782P	20020606 (60)
	US 2002-386782P	20020606 (60)
	US 2002-406784P	20020829 (60)
	US 2002-406784P	20020829 (60)
	US 2002-408378P	20020905 (60)
	US 2002-408378P	20020905 (60)
	US 2002-409293P	20020909 (60)
	US 2002-409293P	20020909 (60)
	US 2003-440129P	20030115 (60)
	US 2003-440129P	20030115 (60)
	US 2002-362016P	20020306 (60)
	US 2001-292217P	20010518 (60)
	US 2004-543480P	20040210 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP, 300 S. WACKER DRIVE, 32ND FLOOR, CHICAGO, IL, 60606, US
NUMBER OF CLAIMS: 34
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 24 Drawing Page(s)

LINE COUNT: 7370
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention relates to compounds, compositions, and methods useful for modulating Fas and/or FasL gene expression using short interfering nucleic acid (siNA) molecules. This invention also relates to compounds, compositions, and methods useful for modulating the expression and activity of other genes involved in pathways of Fas and/or FasL gene expression and/or activity by RNA interference (RNAi) using small nucleic acid molecules. In particular, the instant invention features small nucleic acid molecules, such as short interfering nucleic acid (siNA), short interfering RNA (siRNA), double-stranded RNA (dsRNA), micro-RNA (miRNA), and short hairpin RNA (shRNA) molecules and methods used to modulate the expression of Fas and/or FasL genes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 10 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2005:92934 USPATFULL
TITLE: RNA interference mediated inhibition of Fos gene expression using short interfering nucleic acid (siNA)
INVENTOR(S): Polisky, Barry, Boulder, CO, UNITED STATES
McSwiggen, James, Boulder, CO, UNITED STATES
Beigelman, Leonid, Longmont, CO, UNITED STATES
PATENT ASSIGNEE(S): Sirna Therapeutics, Inc., Boulder, CO, UNITED STATES (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005079610	A1	20050414
APPLICATION INFO.:	US 2004-923115	A1	20040820 (10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 2003-US5162, filed on 20 Feb 2003, PENDING Continuation-in-part of Ser. No. WO 2004-US16390, filed on 24 May 2004, PENDING Continuation-in-part of Ser. No. US 2004-826966, filed on 16 Apr 2004, PENDING Continuation-in-part of Ser. No. US 2004-757803, filed on 14 Jan 2004, PENDING Continuation-in-part of Ser. No. US 2003-720448, filed on 24 Nov 2003, PENDING Continuation-in-part of Ser. No. US 2003-693059, filed on 23 Oct 2003, PENDING Continuation-in-part of Ser. No. US 2003-444853, filed on 23 May 2003, PENDING Continuation-in-part of Ser. No. WO 2003-US5346, filed on 20 Feb 2003, PENDING Continuation-in-part of Ser. No. WO 2003-US5028, filed on 20 Feb 2003, PENDING Continuation-in-part of Ser. No. WO 2004-US13456, filed on 30 Apr 2004, PENDING Continuation-in-part of Ser. No. US 2004-780447, filed on 13 Feb 2004, PENDING Continuation-in-part of Ser. No. US 2003-427160, filed on 30 Apr 2003, PENDING Continuation-in-part of Ser. No. WO 2002-US15876, filed on 17 May 2002, PENDING Continuation-in-part of Ser. No. US 2003-727780, filed on 3 Dec 2003, PENDING

NUMBER	DATE

PRIORITY INFORMATION:	US 2002-358580P	20020220 (60)
	US 2002-358580P	20020220 (60)
	US 2002-363124P	20020311 (60)
	US 2002-363124P	20020311 (60)
	US 2002-386782P	20020606 (60)
	US 2002-386782P	20020606 (60)
	US 2002-406784P	20020829 (60)
	US 2002-406784P	20020829 (60)
	US 2002-408378P	20020905 (60)
	US 2002-408378P	20020905 (60)
	US 2002-409293P	20020909 (60)
	US 2002-409293P	20020909 (60)
	US 2003-440129P	20030115 (60)
	US 2003-440129P	20030115 (60)
	US 2001-292217P	20010518 (60)
	US 2002-362016P	20020306 (60)
	US 2001-306883P	20010720 (60)
	US 2001-311865P	20010813 (60)
	US 2004-543480P	20040210 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP, 300 S. WACKER DRIVE, 32ND FLOOR, CHICAGO, IL, 60606, US	
NUMBER OF CLAIMS:	35	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	26 Drawing Page(s)	
LINE COUNT:	10180	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to compounds, compositions, and methods useful for modulating c-Fos gene expression using short interfering nucleic acid (siNA) molecules. This invention also relates to compounds, compositions, and methods useful for modulating the expression and activity of other genes involved in pathways of c-Fos gene expression and/or activity by RNA interference (RNAi) using small nucleic acid molecules. In particular, the instant invention features small nucleic acid molecules, such as short interfering nucleic acid (siNA), short interfering RNA (siRNA), double-stranded RNA (dsRNA), micro-RNA (miRNA), and short hairpin RNA (shRNA) molecules and methods used to modulate the expression of c-Fos genes. The small nucleic acid molecules are useful in the treatment of cancer, proliferative diseases or conditions, inflammatory diseases or conditions, allergic diseases or conditions, infectious diseases or conditions, autoimmune diseases or conditions, or transplantation/allograft rejection in a subject or organism.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 11 OF 26 USPATFULL on STN

ACCESSION NUMBER:	2005:38053 USPATFULL
TITLE:	RNA interference mediated inhibition of gene expression using chemically modified short interfering nucleic acid (SiNA)
INVENTOR(S):	McSwiggen, James, Boulder, CO, UNITED STATES Macejak, Dennis, Arvada, CO, UNITED STATES Morrissey, David, Boulder, CO, UNITED STATES
PATENT ASSIGNEE(S):	Sirna Therapeutics, Inc., Boulder, CO (U.S. corporation)

NUMBER	KIND	DATE

PATENT INFORMATION:	US 2005032733	A1	20050210
APPLICATION INFO.:	US 2004-826966	A1	20040416 (10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2004-757803, filed on 14 Jan 2004, PENDING Continuation-in-part of Ser. No. US 2003-720448, filed on 24 Nov 2003, PENDING Continuation-in-part of Ser. No. US 2003-693059, filed on 23 Oct 2003, PENDING Continuation-in-part of Ser. No. US 2003-444853, filed on 23 May 2003, PENDING Continuation-in-part of Ser. No. US 2003-652791, filed on 29 Aug 2003, PENDING Continuation of Ser. No. US 2003-422704, filed on 24 Apr 2003, ABANDONED Continuation of Ser. No. US 2003-417012, filed on 16 Apr 2003, ABANDONED Continuation-in-part of Ser. No. WO 2003-US5346, filed on 20 Feb 2003, PENDING Continuation-in-part of Ser. No. WO 2003-US5028, filed on 20 Feb 2003, PENDING Continuation-in-part of Ser. No. US 2004-780447, filed on 13 Feb 2004, PENDING Continuation-in-part of Ser. No. US 2003-427160, filed on 30 Apr 2003, PENDING Continuation-in-part of Ser. No. WO 2002-US15876, filed on 20 May 2002, PENDING Continuation-in-part of Ser. No. WO 2003-US5346, filed on 20 Feb 2003, PENDING Continuation-in-part of Ser. No. WO 2003-US5028, filed on 20 Feb 2003, PENDING Continuation-in-part of Ser. No. WO 2002-US15876, filed on 20 May 2002, PENDING Continuation-in-part of Ser. No. US 2003-727780, filed on 3 Dec 2003, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-358580P	20020220 (60)
	US 2002-358580P	20020220 (60)
	US 2002-363124P	20020311 (60)
	US 2002-363124P	20020311 (60)
	US 2002-386782P	20020606 (60)
	US 2002-386782P	20020606 (60)
	US 2002-406784P	20020829 (60)
	US 2002-406784P	20020829 (60)
	US 2002-408378P	20020905 (60)
	US 2002-408378P	20020905 (60)
	US 2002-409293P	20020909 (60)
	US 2002-409293P	20020909 (60)
	US 2003-440129P	20030115 (60)
	US 2003-440129P	20030115 (60)
	US 2001-292217P	20010518 (60)
	US 2001-306883P	20010720 (60)
	US 2001-311865P	20010813 (60)
	US 2002-362016P	20020306 (60)
	US 2002-358580P	20020220 (60)
	US 2002-363124P	20020311 (60)
	US 2002-386782P	20020606 (60)
	US 2002-406784P	20020829 (60)
	US 2002-408378P	20020905 (60)
	US 2002-409293P	20020909 (60)
	US 2003-440129P	20030115 (60)
	US 2001-292217P	20010518 (60)

Searcher : Shears 571-272-2528

	US 2002-362016P	20020306 (60)
	US 2001-306883P	20010720 (60)
	US 2001-311865P	20010813 (60)
	US 2004-543480P	20040210 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP, 300 S. WACKER DRIVE, 32ND FLOOR, CHICAGO, IL, 60606
NUMBER OF CLAIMS: 32
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 113 Drawing Page(s)
LINE COUNT: 10124
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention concerns methods and reagents useful in modulating gene expression in a variety of applications, including use in therapeutic, diagnostic, target validation, and genomic discovery applications. Specifically, the invention relates to synthetic chemically modified small nucleic acid molecules, such as short interfering nucleic acid (siNA), short interfering RNA (siRNA), double-stranded RNA (dsRNA), micro-RNA (miRNA), and short hairpin RNA (shRNA) molecules capable of mediating RNA interference (RNAi) against target nucleic acid sequences. The small nucleic acid molecules are useful in the treatment of any disease or condition that responds to modulation of gene expression or activity in a cell, tissue, or organism.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 12 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2005:37538 USPATFULL
TITLE: Generation of human regulatory T cells by bacterial toxins for the treatment of inflammatory disorders
INVENTOR(S): Zadeh, Homayoun H., Calabasas, CA, UNITED STATES
PATENT ASSIGNEE(S): University of Southern California (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2005032217	A1	20050210	
APPLICATION INFO.:	US 2004-817506	A1	20040401	(10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2003-459778P	20030401 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HOGAN & HARTSON L.L.P., Suite 1900, 500 South Grand Avenue, Los Angeles, CA, 90071
NUMBER OF CLAIMS: 33
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 9 Drawing Page(s)
LINE COUNT: 1983
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An adoptive immunotherapy using ex vivo-generated regulatory T cells may be used for the suppression of undesireable immune response. T cells are to be obtained from the patient's blood, and upon exposure to a set of toxins from the pathogen A. actinomycetemcomitans, the population of regulatory T cells will be enriched ex vivo and adoptively transferred back to the patient. The novel aspect of the

present invention is that it generates large numbers of type 1 regulatory T cells, which secrete Interleukin-10.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 13 OF 26 USPATFULL on STN

ACCESSION NUMBER: 2005:13242 USPATFULL

TITLE: Therapeutic treatment and prevention of infections with a bioactive materials encapsulated within a biodegradable-biocompatible polymeric matrix

INVENTOR(S): Setterstrom, Jean A., Alpharetta, GA, United States
Van Hamont, John E., Fort Meade, MD, United States
Reid, Robert H., Kensington, MD, United States
Jacob, Elliot, Silver Spring, MD, United States
Jeyanthi, Ramasubbu, Columbia, MD, United States
Boedeker, Edgar C., Chevy Chase, MD, United States
McQueen, Charles E., Olney, MD, United States
Jarboe, Daniel L., Silver Spring, MD, United States
Cassels, Frederick, Ellicott City, MD, United States
Brown, William, Denver, CO, United States
Thies, Curt, Ballwin, MO, United States
Tice, Thomas R., Birmington, AL, United States
Roberts, F. Donald, Dover, MA, United States
Friden, Phil, Bedford, MA, United States(4)

PATENT ASSIGNEE(S): The United States of America as represented by the Secretary of the Army, Washington, DC, United States (U.S. government)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6844010	B1	20050118
APPLICATION INFO.:	US 2000-618577		20000718 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1997-789734, filed on 27 Jan 1997, now patented, Pat. No. US 6309669
Continuation-in-part of Ser. No. US 1996-590973, filed on 24 Jan 1996, now abandoned
Continuation-in-part of Ser. No. US 1995-446149, filed on 22 May 1995, now abandoned
Continuation-in-part of Ser. No. US 1984-590308, filed on 16 Mar 1984, now abandoned
Continuation-in-part of Ser. No. US 618577
Continuation-in-part of Ser. No. US 1997-867301, filed on 2 Jun 1997, now patented, Pat. No. US 5970426 Continuation-in-part of Ser. No. US 1995-446148, filed on 22 May 1995, now patented, Pat. No. US 6410056

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Carlson, Karen Cochrane
ASSISTANT EXAMINER: Robinson, Hope A.
LEGAL REPRESENTATIVE: Arwine, Elizabeth
NUMBER OF CLAIMS: 18
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 85 Drawing Figure(s); 85 Drawing Page(s)
LINE COUNT: 6232
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Novel burst-free, sustained release biocompatible and biodegrable microcapsules which can be programmed to release their active core

for variable durations ranging from 1-100 days in an aqueous physiological environment. The microcapsules are comprised of a core of polypeptide or other biologically active agent encapsulated in a matrix of poly(lactide/glycolide) copolymer, which may contain a pharmaceutically-acceptable adjuvant, as a blend of upcapped free carboxyl end group, and end-capped forms ranging in ratios from 100/0 to 1/99.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 14 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2004:63353 USPATFULL
TITLE: Recombinant fusobacterium necrophorum leukotoxin vaccine and prepaation thereof
INVENTOR(S): Nagaraja, T.G., Manhattah, KS, UNITED STATES
Stewart, George C., Manhattan, KS, UNITED STATES
Narayanan, Sanjeev K., Irving, TX, UNITED STATES
Chengappa, M.M., Manhattan, KS, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004047871	A1	20040311
APPLICATION INFO.:	US 2003-647057	A1	20030822 (10)

RELATED APPLN. INFO.: Division of Ser. No. US 2001-841786, filed on 24 Apr 2001, GRANTED, Pat. No. US 6669940
Continuation-in-part of Ser. No. US 2000-558257, filed on 25 Apr 2000, ABANDONED
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HOVEY, WILLIAMS, TIMMONS & COLLINS, Suite 400, 2405 Grand, Kansas City, MO, 64108
NUMBER OF CLAIMS: 17
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 13 Drawing Page(s)
LINE COUNT: 3455
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The F. necrophorum gene expressing leukotoxin was sequenced and cloned. The leukotoxin open reading frame (lktA) is part of a multi-gene operon containing 9,726 bp, and encoding a protein containing 3,241 amino acids with an overall molecular weight of 335,956 daltons. The protein encoded by the gene was truncated into five polypeptides having overlapping regions by truncating the full length gene into five different sections and amplifying, expressing, and recovering the protein encoded by each of these sections. Additionally, a region upstream of the gene was sequenced and the polypeptide encoded by that nucleotide sequence was purified and isolated. These polypeptides along with the full length protein are then tested to determine their immunogenicity and protective immunity in comparison to the efficacy of immunization conferred by inactivated native leukotoxin in F. necrophorum culture supernatant.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 15 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2003:180701 USPATFULL
TITLE: Sequence-directed DNA-binding molecules compositons and methods
INVENTOR(S): Edwards, Cynthia A., Menlo Park, CA, UNITED STATES
Cantor, Charles R., Del Mar, CA, UNITED STATES

Andrews, Beth M., Maynard, MA, UNITED STATES
Turin, Lisa M., Redwood City, CA, UNITED STATES
Fry, Kirk E., Palo Alto, CA, UNITED STATES
PATENT ASSIGNEE(S): Genelabs Technologies, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003124530	A1	20030703
	US 6869765	B2	20050322
APPLICATION INFO.:	US 2001-993346	A1	20011113 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1999-354947, filed on 15 Jul 1999, GRANTED, Pat. No. US 6384208 Continuation of Ser. No. US 1995-482080, filed on 7 Jun 1995, GRANTED, Pat. No. US 6010849 Division of Ser. No. US 1993-171389, filed on 20 Dec 1993, GRANTED, Pat. No. US 5578444 Continuation-in-part of Ser. No. US 1993-123936, filed on 17 Sep 1993, GRANTED, Pat. No. US 5726014 Continuation-in-part of Ser. No. US 1992-996783, filed on 23 Dec 1992, GRANTED, Pat. No. US 5693463 Continuation-in-part of Ser. No. US 1991-723618, filed on 27 Jun 1991, ABANDONED
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: PERKINS COIE LLP, P.O. BOX 2168, MENLO PARK, CA, 94026
NUMBER OF CLAIMS: 33
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 47 Drawing Page(s)
LINE COUNT: 10851
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention defines a DNA: protein-binding assay useful for screening libraries of synthetic or biological compounds for their ability to bind DNA test sequences. The assay is versatile in that any number of test sequences can be tested by placing the test sequence adjacent to a defined protein binding screening sequence. Binding of molecules to these test sequence changes the binding characteristics of the protein molecule to its cognate binding sequence. When such a molecule binds the test sequence the equilibrium of the DNA:protein complexes is disturbed, generating changes in the concentration of free DNA probe. Numerous exemplary target test sequences (SEQ ID NO:1 to SEQ ID NO:600) are set forth. The assay of the present invention is also useful to characterize the preferred binding sequences of any selected DNA-binding molecule.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 16 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2002:105681 USPATFULL
TITLE: Recombinant fusobacterium necrophorum leukotoxin vaccine and preparation thereof
INVENTOR(S): Nagaraja, T.G., Manhattah, KS, UNITED STATES
Stewart, George C., Manhattan, KS, UNITED STATES
Narayanan, Sanjeev K., Irving, TX, UNITED STATES
Chengappa, M. M., Manhattan, KS, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002054883	A1	20020509

	US 6669940	B2	20031230
APPLICATION INFO.:	US 2001-841786	A1	20010424 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2000-558257, filed on 25 Apr 2000, PENDING
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HOVEY, WILLIAMS, TIMMONS & COLLINS, SUITE 400, 2405 GRAND BLVD., KANSAS CITY, MO, 64108
NUMBER OF CLAIMS: 45
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 12 Drawing Page(s)
LINE COUNT: 3541
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The F. necrophorum gene expressing leukotoxin was sequenced and cloned. The leukotoxin open reading frame (lktA) is part of a multi-gene operon containing 9,726 bp, and encoding a protein containing 3,241 amino acids with an overall molecular weight of 335,956 daltons. The protein encoded by the gene was truncated into five polypeptides having overlapping regions by truncating the full length gene into five different sections and amplifying, expressing, and recovering the protein encoded by each of these sections. Additionally, a region upstream of the gene was sequenced and the polypeptide encoded by that nucleotide sequence was purified and isolated. These polypeptides along with the full length protein are then tested to determine their immunogenicity and protective immunity in comparison to the efficacy of immunization conferred by inactivated native leukotoxin in F. necrophorum culture supernatant.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 17 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2002:102627 USPATFULL
TITLE: Sequence directed DNA binding molecules compositions and methods
INVENTOR(S): Edwards, Cynthia A., Menlo Park, CA, United States
Cantor, Charles R., Boston, MA, United States
Andrews, Beth M., Maynard, MA, United States
Turin, Lisa M., Redwood City, CA, United States
Fry, Kirk E., Palo Alto, CA, United States
PATENT ASSIGNEE(S): Genelabs Technologies, Inc., Redwood City, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6384208	B1	20020507
APPLICATION INFO.:	US 1999-354947		19990715 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1995-482080, filed on 7 Jun 1995, now patented, Pat. No. US 6010849, issued on 4 Jan 2000 Division of Ser. No. US 1993-171389, filed on 20 Dec 1993, now patented, Pat. No. US 5578444, issued on 26 Nov 1996 Continuation-in-part of Ser. No. US 1993-123936, filed on 17 Sep 1993, now patented, Pat. No. US 5726014, issued on 10 Mar 1998 Continuation-in-part of Ser. No. US 1992-996783, filed on 23 Dec 1992, now patented, Pat. No. US 5693463, issued on 2 Dec 1997 Continuation-in-part of Ser. No. US 1991-723618, filed on 27 Jun 1991, now abandoned
DOCUMENT TYPE: Utility

FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Schwartzman, Robert A.
ASSISTANT EXAMINER: Davis, Katharine F.
LEGAL REPRESENTATIVE: Fabian, Gary, Thrower, Larry W., Perkins Coie LLP
NUMBER OF CLAIMS: 1
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 71 Drawing Figure(s); 47 Drawing Page(s)
LINE COUNT: 5215
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention defines a DNA: protein-binding assay useful for screening libraries of synthetic or biological compounds for their ability to bind DNA test sequences. The assay is versatile in that any number of test sequences can be tested by placing the test sequence adjacent to a defined protein binding screening sequence. Binding of molecules to these test sequence changes the binding characteristics of the protein molecule to its cognate binding sequence. When such a molecule binds the test sequence the equilibrium of the DNA:protein complexes is disturbed, generating changes in the concentration of free DNA probe. Numerous exemplary target test sequences (SEQ ID NO:1 to SEQ ID NO:600) are set forth. The assay of the present invention is also useful to characterize the preferred binding sequences of any selected DNA-binding molecule.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 18 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2001:190752 USPATFULL
TITLE: Therapeutic treatment and prevention of infections with a bioactive materials encapsulated within a biodegradable-biocompatible polymeric matrix
INVENTOR(S): Setterstrom, Jean A., Alpharetta, GA, United States
Van Hamont, John E., Fort Meade, MD, United States
Reid, Robert H., McComas, CT, United States
Jacob, Elliot, Silver Spring, MD, United States
Jeyanthi, Ramasubbu, Columbia, MD, United States
Boedeker, Edgar C., Chevy Chase, MD, United States
McQueen, Charles E., Olney, MD, United States
Jarboe, Daniel L., Silver Spring, MD, United States
Cassels, Frederick, Ellicott City, MD, United States
Brown, William, Denver, CO, United States
Thies, Curt, Ballwin, MO, United States
Tice, Thomas R., Birmington, AL, United States
Roberts, F. Donald, Dover, MA, United States
Friden, Phil, Beford, MA, United States(4)
PATENT ASSIGNEE(S): The United States of America as represented by the Secretary of the Army, Washington, DC, United States (U.S. government)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6309669	B1	20011030
APPLICATION INFO.:	US 1997-789734		19970127 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1996-590973, filed on 24 Jan 1996, now abandoned
Continuation-in-part of Ser. No. US 1995-446149, filed on 22 May 1995, now abandoned Continuation of Ser. No. US 1984-590308, filed on 6 Mar 1984, now

abandoned And Ser. No. US 789734 Continuation-in-part of Ser. No. US 1995-446148, filed on 22 May 1995 Continuation-in-part of Ser. No. US 1992-867301, filed on 10 Apr 1992, now patented, Pat. No. US 5417986, issued on 23 May 1995 Continuation-in-part of Ser. No. US 1984-590308, filed on 16 Mar 1984, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Harrison, Robert H.
LEGAL REPRESENTATIVE: Nash, Caroline, Arwine, Elizabeth
NUMBER OF CLAIMS: 25
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 87 Drawing Figure(s); 85 Drawing Page(s)
LINE COUNT: 6182
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Novel burst-free, sustained release biocompatible and biodegrable microcapsules which can be programmed to release their active core for variable durations ranging from 1-100 days in an aqueous physiological environment. The microcapsules are comprised of a core of polypeptide or other biologically active agent encapsulated in a matrix of poly(lactide/glycolide) copolymer, which may contain a pharmaceutically-acceptable adjuvant, as a blend of upcapped free carboxyl end group and end-capped forms ranging in ratios from 100/0 to 1/99.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 19 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2000:1692 USPATFULL
TITLE: Sequence-directed DNA binding molecules compositions and methods
INVENTOR(S): Edwards, Cynthia A., Menlo Park, CA, United States
Cantor, Charles R., Boston, MA, United States
Andrews, Beth M., Maynard, MA, United States
Turin, Lisa M., Redwood City, CA, United States
Fry, Kirk E., Palo Alto, CA, United States
PATENT ASSIGNEE(S): Genelabs Technologies, Inc., Redwood, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6010849		20000104
APPLICATION INFO.:	US 1995-482080		19950607 (8)

RELATED APPLN. INFO.: Division of Ser. No. US 1993-171389, filed on 20 Dec 1993, now patented, Pat. No. US 5578444 which is a continuation-in-part of Ser. No. US 1993-123936, filed on 17 Sep 1993, now patented, Pat. No. US 5726014 which is a continuation-in-part of Ser. No. US 1992-996783, filed on 23 Dec 1992, now patented, Pat. No. US 5693463 which is a continuation-in-part of Ser. No. US 1991-723618, filed on 27 Jun 1991, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Degen, Nancy
ASSISTANT EXAMINER: Schwartzman, Robert
LEGAL REPRESENTATIVE: Fabin, Gary R.Dehlinger & Associates
NUMBER OF CLAIMS: 11

EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 48 Drawing Figure(s); 47 Drawing Page(s)
LINE COUNT: 10022
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention defines a DNA:protein-binding assay useful for screening libraries of synthetic or biological compounds for their ability to bind DNA test sequences. The assay is versatile in that any number of test sequences can be tested by placing the test sequence adjacent to a defined protein binding screening sequence. Binding of molecules to these test sequence changes the binding characteristics of the protein molecule to its cognate binding sequence. When such a molecule binds the test sequence the equilibrium of the DNA:protein complexes is disturbed, generating changes in the concentration of free DNA probe. Numerous exemplary target test sequences (SEQ ID NO:1 to SEQ ID NO:600) are set forth. The assay of the present invention is also useful to characterize the preferred binding sequences of any selected DNA-binding molecule.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 20 OF 26 USPATFULL on STN
ACCESSION NUMBER: 1999:18912 USPATFULL
TITLE: Method of determining DNA sequence preference of a DNA-binding molecule
INVENTOR(S): Edwards, Cynthia A., Menlo Park, CA, United States
Cantor, Charles R., Boston, MA, United States
Andrews, Beth M., Maynard, MA, United States
Turin, Lisa M., Redwood City, CA, United States
Fry, Kirk E., Palo Alto, CA, United States
PATENT ASSIGNEE(S): Genelabs Technologies, Inc., Redwood City, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5869241		19990209
APPLICATION INFO.:	US 1995-475228		19950607 (8)

RELATED APPLN. INFO.: Division of Ser. No. US 1993-171389, filed on 20 Dec 1993, now patented, Pat. No. US 5578444 which is a continuation-in-part of Ser. No. US 1993-123936, filed on 17 Sep 1993, now patented, Pat. No. US 5726014 which is a continuation-in-part of Ser. No. US 1992-996783, filed on 23 Dec 1992, now patented, Pat. No. US 5693463 which is a continuation-in-part of Ser. No. US 1991-723618, filed on 27 Jun 1991, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Zitomer, Stepanie W.
ASSISTANT EXAMINER: Whisenant, Ethan
LEGAL REPRESENTATIVE: Fabian, Gary R., Stratford, Carol A., Dehlinger, Peter J.
NUMBER OF CLAIMS: 11
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 72 Drawing Figure(s); 47 Drawing Page(s)
LINE COUNT: 9840
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention defines a DNA:protein-binding assay useful for screening libraries of synthetic or biological compounds for their

ability to bind DNA test sequences. The assay is versatile in that any number of test sequences can be tested by placing the test sequence adjacent to a defined protein binding screening sequence. Binding of molecules to these test sequence changes the binding characteristics of the protein molecule to its cognate binding sequence. When such a molecule binds the test sequence the equilibrium of the DNA:protein complexes is disturbed, generating changes in the concentration of free DNA probe. Numerous exemplary target test sequences (SEQ ID NO:1 to SEQ ID NO:600) are set forth. The assay of the present invention is also useful to characterize the preferred binding sequences of any selected DNA-binding molecule.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 21 OF 26 USPATFULL on STN
ACCESSION NUMBER: 1998:44877 USPATFULL
TITLE: Sequence-directed DNA-binding molecules compositions and methods
INVENTOR(S): Edwards, Cynthia A., Menlo Park, CA, United States
Fry, Kirk E., Palo Alto, CA, United States
Cantor, Charles R., Boston, MA, United States
Andrews, Beth M., Maynard, MA, United States
PATENT ASSIGNEE(S): Genelabs Technologies, Inc., Redwood City, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5744131		19980428
APPLICATION INFO.:	US 1995-476876		19950607 (8)

RELATED APPLN. INFO.: Division of Ser. No. US 1992-996783, filed on 23 Dec 1992 which is a continuation-in-part of Ser. No. US 1991-723618, filed on 27 Jun 1991, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Zitomer, Stephanie W.
ASSISTANT EXAMINER: Atzel, Amy
LEGAL REPRESENTATIVE: Fabian, Gary R., Stratford, Carol A., Dehlinger, Peter J.
NUMBER OF CLAIMS: 3
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 48 Drawing Figure(s); 33 Drawing Page(s)
LINE COUNT: 5113
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention defines an assay useful for screening libraries of synthetic or biological compounds for their ability to bind specific DNA test sequences. The assay is also useful for determining the sequence specificity and relative DNA-binding affinity of DNA-binding molecules for any particular DNA sequence. Also described herein are potential applications of the assay, including: 1) the detection of lead compounds or new drugs via the mass screening of libraries of synthetic or biological compounds (i.e., fermentation broths); 2) the design of sequence-specific DNA-binding drugs comprised of homo- or hetero-meric subunits of molecules for which the sequence specificity was determined using the assay; and 3) the use of molecules for which sequence specificity was determined using the assay as covalently attached moieties to aid in the binding of nucleic acid or other

macromolecular polymers to nucleic acid sequences.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 22 OF 26 USPATFULL on STN
ACCESSION NUMBER: 1998:39383 USPATFULL
TITLE: Sequence-directed DNA-binding molecules compositions and methods
INVENTOR(S): Edwards, Cynthia A., Menlo Park, CA, United States
Fry, Kirk E., Palo Alto, CA, United States
Cantor, Charles R., Boston, MA, United States
Andrews, Beth M., Maynard, MA, United States
PATENT ASSIGNEE(S): Genelabs Technologies, Inc., Redwood City, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5738990		19980414
APPLICATION INFO.:	US 1995-475221		19950607 (8)

RELATED APPLN. INFO.: Division of Ser. No. US 1992-996783, filed on 23 Dec 1992 which is a continuation-in-part of Ser. No. US 1991-723618, filed on 27 Jun 1991, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Guzo, David
ASSISTANT EXAMINER: Brusca, John S.
LEGAL REPRESENTATIVE: Fabian, Gary R., Stratford, Carol A., Dehlinger, Peter J.
NUMBER OF CLAIMS: 5
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 48 Drawing Figure(s); 33 Drawing Page(s)
LINE COUNT: 5040
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention defines an assay useful for screening libraries of synthetic or biological compounds for their ability to bind specific DNA test sequences. The assay is also useful for determining the sequence specificity and relative DNA-binding affinity of DNA-binding molecules for any particular DNA sequence. Also described herein are potential applications of the assay, including: 1) the detection of lead compounds or new drugs via the mass screening of libraries of synthetic or biological compounds (i.e., fermentation broths); 2) the design of sequence-specific DNA-binding drugs comprised of homo- or hetero-meric subunits of molecules for which the sequence specificity was determined using the assay; and 3) the use of molecules for which sequence specificity was determined using the assay as covalently attached moieties to aid in the binding of nucleic acid or other macromolecular polymers to nucleic acid sequences.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 23 OF 26 USPATFULL on STN
ACCESSION NUMBER: 1998:25075 USPATFULL
TITLE: Screening assay for the detection of DNA-binding molecules
INVENTOR(S): Edwards, Cynthia A., Menlo Park, CA, United States
Cantor, Charles R., Boston, MA, United States
Andrews, Beth M., Watertown, MA, United States

	Turin, Lisa M., Berkeley, CA, United States
PATENT ASSIGNEE(S):	Genelabs Technologies, Inc., Redwood City, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5726014		19980310
APPLICATION INFO.:	US 1993-123936		19930917 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1992-996783, filed on 23 Dec 1992 which is a continuation-in-part of Ser. No. US 1991-723618, filed on 27 Jun 1991, now abandoned

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Jones, W. Gary
ASSISTANT EXAMINER: Atzel, Amy
LEGAL REPRESENTATIVE: Fabian, Gary R., Stratford, Carol A., Dehlinger, Peter J.
NUMBER OF CLAIMS: 19
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 72 Drawing Figure(s); 47 Drawing Page(s)
LINE COUNT: 5659
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention defines a DNA:protein-binding assay useful for screening libraries of synthetic or biological compounds for their ability to bind DNA test sequences. The assay is versatile in that any number of test sequences can be tested by placing the test sequence adjacent to a defined protein binding screening sequence. Binding of molecules to these test sequence changes the binding characteristics of the protein molecule to its cognate binding sequence. When such a molecule binds the test sequence the equilibrium of the DNA:protein complexes is disturbed, generating changes in the concentration of free DNA probe. Numerous exemplary target test sequences (SEQ ID NO:1 to SEQ ID NO:600) are set forth. The assay of the present invention is also useful to characterize the preferred binding sequences of any selected DNA-binding molecule.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 24 OF 26 USPATFULL on STN

ACCESSION NUMBER:	1998:14634 USPATFULL
TITLE:	Method of constructing sequence-specific DNA-binding molecules
INVENTOR(S):	Edwards, Cynthia A., Menlo Park, CA, United States Fry, Kirk E., Palo Alto, CA, United States Cantor, Charles R., Boston, MA, United States Andrews, Beth M., Watertown, MA, United States
PATENT ASSIGNEE(S):	Genelabs Technologies, Inc., Redwood City, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5716780		19980210
APPLICATION INFO.:	US 1995-484499		19950607 (8)

RELATED APPLN. INFO.: Division of Ser. No. US 1992-996783, filed on 23 Dec 1992 which is a continuation-in-part of Ser. No. US 1991-723618, filed on 27 Jun 1991, now abandoned

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Jones, W. Gary
ASSISTANT EXAMINER: Atzel, Amy
LEGAL REPRESENTATIVE: Fabian, Gary R., Stratford, Carol A., Dehlinger, Peter J.
NUMBER OF CLAIMS: 9
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 48 Drawing Figure(s); 33 Drawing Page(s)
LINE COUNT: 4929
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention defines an assay useful for screening libraries of synthetic or biological compounds for their ability to bind specific DNA test sequences. The assay is also useful for determining the sequence specificity and relative DNA-binding affinity of DNA-binding molecules for any particular DNA sequence. Also described herein are potential applications of the assay, including: 1) the detection of lead compounds or new drugs via the mass screening of libraries of synthetic or biological compounds (i.e., fermentation broths); 2) the design of sequence-specific DNA-binding drugs comprised of homo- or hetero-meric subunits of molecules for which the sequence specificity was determined using the assay; and 3) the use of molecules for which sequence specificity was determined using the assay as covalently attached moieties to aid in the binding of nucleic acid or other macromolecular polymers to nucleic acid sequences.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 25 OF 26 USPATFULL on STN
ACCESSION NUMBER: 97:112300 USPATFULL
TITLE: Method of ordering sequence binding preferences of a DNA-binding molecule
INVENTOR(S): Edwards, Cynthia A., Menlo Park, CA, United States
Fry, Kirk E., Palo Alto, CA, United States
Cantor, Charles R., Boston, MA, United States
Andrews, Beth M., Maynard, MA, United States(4)
PATENT ASSIGNEE(S): Genelabs Technologies, Inc., Redwood City, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5693463		19971202	
APPLICATION INFO.:	US 1992-996783		19921223	(7)

DISCLAIMER DATE: 20110426
RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1991-723618, filed on 27 Jun 1991, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Zitomer, Stephanie W.
ASSISTANT EXAMINER: Atzel, Amy
LEGAL REPRESENTATIVE: Fabian, Gary R., Stratford, Carol A., Dehlinger, Peter J.
NUMBER OF CLAIMS: 3
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 48 Drawing Figure(s); 33 Drawing Page(s)
LINE COUNT: 4908
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention defines an assay useful for screening

libraries of synthetic or biological compounds for their ability to bind specific DNA test sequences. The assay is also useful for determining the sequence specificity and relative DNA-binding affinity of DNA-binding molecules for any particular DNA sequence. Also described herein are potential applications of the assay, including: 1) the detection of lead compounds or new drugs via the mass screening of libraries of synthetic or biological compounds (i.e., fermentation broths); 2) the design of sequence-specific DNA-binding drugs comprised of homo- or hetero-meric subunits of molecules for which the sequence specificity was determined using the assay; and 3) the use of molecules for which sequence specificity was determined using the assay as covalently attached moieties to aid in the binding of nucleic acid or other macromolecular polymers to nucleic acid sequences.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

FILE 'MEDLINE' ENTERED AT 16:06:19 ON 08 DEC 2005

FILE LAST UPDATED: 6 DEC 2005 (20051206/UP). FILE COVERS 1950 TO DATE.

On December 19, 2004, the 2005 MeSH terms were loaded.

The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow promt (=>). See also:

http://www.nlm.nih.gov/mesh/
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

L26	718	SEA	FILE=MEDLINE ABB=ON	PLU=ON	"FUSOBACTERIUM INFECTION"/CT
L27	455	SEA	FILE=MEDLINE ABB=ON	PLU=ON	"FUSOBACTERIUM NECROPHORUM"/CT
L28	731600	SEA	FILE=MEDLINE ABB=ON	PLU=ON	MICE/CT
L29	78	SEA	FILE=MEDLINE ABB=ON	PLU=ON	(L26 OR L27) AND L28
L30	83942	SEA	FILE=MEDLINE ABB=ON	PLU=ON	PEPTIDES/CT
L31	118149	SEA	FILE=MEDLINE ABB=ON	PLU=ON	PROTEINS/CT
L32	0	SEA	FILE=MEDLINE ABB=ON	PLU=ON	L29 AND (L30 OR L31)

L26	718	SEA	FILE=MEDLINE ABB=ON	PLU=ON	"FUSOBACTERIUM INFECTION"/CT
L27	455	SEA	FILE=MEDLINE ABB=ON	PLU=ON	"FUSOBACTERIUM NECROPHORUM"/CT
L28	731600	SEA	FILE=MEDLINE ABB=ON	PLU=ON	MICE/CT
L29	78	SEA	FILE=MEDLINE ABB=ON	PLU=ON	(L26 OR L27) AND L28
L33	12138	SEA	FILE=MEDLINE ABB=ON	PLU=ON	NUCLEOTIDES/CT
L34	5987	SEA	FILE=MEDLINE ABB=ON	PLU=ON	"NUCLEIC ACIDS"/CT
L35	0	SEA	FILE=MEDLINE ABB=ON	PLU=ON	L29 AND (L33 OR L34)

Searcher : Shears 571-272-2528

L26	718	SEA	FILE=MEDLINE	ABB=ON PLU=ON	"FUSOBACTERIUM INFECTION"/CT
L27	455	SEA	FILE=MEDLINE	ABB=ON PLU=ON	"FUSOBACTERIUM NECROPHORUM"/CT
L30	83942	SEA	FILE=MEDLINE	ABB=ON PLU=ON	PEPTIDES/CT
L31	118149	SEA	FILE=MEDLINE	ABB=ON PLU=ON	PROTEINS/CT
L36	2	SEA	FILE=MEDLINE	ABB=ON PLU=ON	(L26 OR L27) AND (L30 OR L31)

L26	718	SEA	FILE=MEDLINE	ABB=ON PLU=ON	"FUSOBACTERIUM INFECTION"/CT
L27	455	SEA	FILE=MEDLINE	ABB=ON PLU=ON	"FUSOBACTERIUM NECROPHORUM"/CT
L33	12138	SEA	FILE=MEDLINE	ABB=ON PLU=ON	NUCLEOTIDES/CT
L34	5987	SEA	FILE=MEDLINE	ABB=ON PLU=ON	"NUCLEIC ACIDS"/CT
L37	0	SEA	FILE=MEDLINE	ABB=ON PLU=ON	(L26 OR L27) AND (L33 OR L34)

L36 ANSWER 1 OF 2 MEDLINE on STN

ACCESSION NUMBER: 2001454830 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11500416
TITLE: Cloning, sequencing, and expression of the leukotoxin gene from Fusobacterium necrophorum.
AUTHOR: Narayanan S K; Nagaraja T G; Chengappa M M; Stewart G C
CORPORATE SOURCE: Department of Diagnostic Medicine/Pathobiology, College of Veterinary Medicine, Kansas State University, Manhattan, Kansas 66506, USA.
SOURCE: Infection and immunity, (2001 Sep) 69 (9) 5447-55. Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF312861
ENTRY MONTH: 200109
ENTRY DATE: Entered STN: 20010814
Last Updated on STN: 20010917
Entered Medline: 20010913

ED Entered STN: 20010814
Last Updated on STN: 20010917
Entered Medline: 20010913

AB Fusobacterium necrophorum is a gram-negative, rod-shaped, anaerobic bacterium that is a primary or secondary etiological agent in a variety of necrotic purulent infections in animals and humans. Included are diseases of cattle such as liver abscesses and foot rot, which have economically important consequences for the cattle industry. The major virulence factor of this bacterium is leukotoxin, a secreted protein of high molecular weight active against leukocytes from ruminants. The screening of a genomic DNA library with polyclonal antisera raised against native affinity-purified leukotoxin and further extension of the sequence using inverse PCR led to the cloning of the entire leukotoxin gene. The leukotoxin gene open reading frame (ORF; lktA) consists of 9,726 bp and encodes a protein of 3,241 amino acids with an overall molecular weight of 335,956. The leukotoxin does not have sequence similarity with any other bacterial

leukotoxin. Five truncated overlapping polypeptides covering the whole lktA ORF were used to immunize rabbits. In Western blot assays, polyclonal antisera raised against all five truncated polypeptides recognized affinity-purified leukotoxin from F. necrophorum culture supernatant in a Western blot assay. Antisera directed against two of the five polypeptides had neutralizing activity against the toxin. The entire leukotoxin ORF was expressed in Escherichia coli. Flow-cytometric analysis showed that the recombinant leukotoxin was active against bovine polymorphonuclear leukocytes and was inhibited with antiserum raised against the F. necrophorum leukotoxin. Southern blot hybridization analysis revealed different patterns of lktA hybridizing bands between isolates of the two subspecies of F. necrophorum.

L36 ANSWER 2 OF 2 MEDLINE on STN
ACCESSION NUMBER: 1998275931 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9612984
TITLE: Studies on fusobacteria associated with periodontal diseases.
AUTHOR: Rogers A H
CORPORATE SOURCE: Department of Dentistry, University of Adelaide.
SOURCE: Australian dental journal, (1998 Apr) 43 (2) 105-9.
Ref: 25
Journal code: 0370612. ISSN: 0045-0421.
PUB. COUNTRY: Australia
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Dental Journals; Priority Journals
ENTRY MONTH: 199806
ENTRY DATE: Entered STN: 19980713
Last Updated on STN: 20000303
Entered Medline: 19980629
ED Entered STN: 19980713
Last Updated on STN: 20000303
Entered Medline: 19980629
AB The physiological and metabolic characteristics of representative isolates of the various subspecies of Fusobacterium nucleatum were investigated by growing them in continuous culture in chemically-defined, media. Behaving almost identically, these organisms were found to obtain energy from the fermentation of simple carbohydrates such as glucose or fructose or from the fermentation of certain amino acids, free or in the form of small peptides. The latter can be attacked by aminopeptidase activity which was shown to be essential for the growth of the organism in an environment lacking fermentable carbohydrate and free amino acids but replete with small peptides. This metabolic versatility may explain the presence of F. nucleatum in both supra- and sub-gingival dental plaque and why it is often found together with organisms such as Porphyromonas gingivalis which display powerful endopeptidase activities. Using the technique of allozyme electrophoresis, the current subspeciation of F. nucleatum was shown to be of doubtful validity and evidence, based upon physiological and metabolic properties, for differences in pathogenicity between isolates was not detected. While this organism is a member of various bacterial consortia associated with periodontal diseases, its contribution to the disease process remains unclear.

(FILE 'CAPLUS, MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH,

JICST-EPLUS, JAPIO, USPATFULL' ENTERED AT 16:14:20 ON 08 DEC 2005)

Author(s)

L38	686	SEA	ABB=ON	PLU=ON	"NAGARAJA T"?/AU
L39	9577	SEA	ABB=ON	PLU=ON	"STEWART G"?/AU
L40	2482	SEA	ABB=ON	PLU=ON	"NARAYANAN S"?/AU
L41	467	SEA	ABB=ON	PLU=ON	"CHENGAPPA M"?/AU
L42	37	SEA	ABB=ON	PLU=ON	L38 AND L39 AND L40 AND L41
L43	143	SEA	ABB=ON	PLU=ON	L38 AND (L39 OR L40 OR L41)
L44	51	SEA	ABB=ON	PLU=ON	L39 AND (L40 OR L41)
L45	52	SEA	ABB=ON	PLU=ON	L40 AND L41
L46	146	SEA	ABB=ON	PLU=ON	(L42 OR L43 OR L44 OR L45 OR L38 OR L39 OR L40 OR L41) AND (L1 OR L8)
L47	28	SEA	ABB=ON	PLU=ON	L46 AND (MUSCULUS OR DOMESTICUS OR RAT OR MOUSE OR MICE OR RODENT)
L48	16	DUP REM L47 (12 DUPLICATES REMOVED)			

L48 ANSWER 1 OF 16 USPATFULL on STN

ACCESSION NUMBER: 2004:63353 USPATFULL

TITLE: Recombinant **fusobacterium necrophorum** leukotoxin vaccine and prepaation thereof

INVENTOR(S): **Nagaraja, T.G.**, Manhattah, KS, UNITED STATES
Stewart, George C., Manhattan, KS, UNITED STATES
Narayanan, Sanjeev K., Irving, TX, UNITED STATES
Chengappa, M.M., Manhattan, KS, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004047871	A1	20040311
APPLICATION INFO.:	US 2003-647057	A1	20030822 (10)

RELATED APPLN. INFO.: Division of Ser. No. US 2001-841786, filed on 24 Apr 2001, GRANTED, Pat. No. US 6669940
Continuation-in-part of Ser. No. US 2000-558257, filed on 25 Apr 2000, ABANDONED

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: HOVEY, WILLIAMS, TIMMONS & COLLINS, Suite 400, 2405 Grand, Kansas City, MO, 64108

NUMBER OF CLAIMS: 17

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 13 Drawing Page(s)

LINE COUNT: 3455

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The **F. necrophorum** gene expressing leukotoxin was sequenced and cloned. The leukotoxin open reading frame (lktA) is part of a multi-gene operon containing 9,726 bp, and encoding a protein containing 3,241 amino acids with an overall molecular weight of 335,956 daltons. The protein encoded by the gene was truncated into five polypeptides having overlapping regions by truncating the full length gene into five different sections and amplifying, expressing, and recovering the protein encoded by each of these sections. Additionally, a region upstream of the gene was sequenced and the polypeptide encoded by that nucleotide sequence was purified and isolated. These polypeptides along with the full length protein are then tested to determine their immunogenicity and protective immunity in comparison to the efficacy of immunization

conferred by inactivated native leukotoxin in **F. necrophorum** culture supernatant.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L48 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 2003:311659 CAPLUS
DOCUMENT NUMBER: 139:163308
TITLE: Immunogenicity and protective effects of truncated recombinant leukotoxin proteins of **Fusobacterium necrophorum** in **mice**
AUTHOR(S): **Narayanan, Sanjeev Kumar; Chengappa, M. M.; Stewart, George C.; Nagaraja, T. G.**
CORPORATE SOURCE: College of Veterinary Medicine, Kansas State University, Manhattan, KS, 66506-5606, USA
SOURCE: Veterinary Microbiology (2003), 93(4), 335-347
CODEN: VMICDQ; ISSN: 0378-1135
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB **Fusobacterium necrophorum**, a gram-neg., anaerobic and rod-shaped bacterium, is generally an opportunistic pathogen and causes a wide variety of necrotic **infections** in animals and humans. Leukotoxin, a secreted protein, is a major virulence factor. The gene encoding the leukotoxin (lktA) in **F. necrophorum** has been cloned, sequenced and expressed in Escherichia coli. Because of low expression levels, problems associated with purifying full-length recombinant protein, and of the phys. instability of the protein, five overlapping leukotoxin gene truncations were constructed. The recombinant polypeptides (BSBSE, SX, GAS, SH, and FINAL) were expressed in E. coli and purified by nickel-affinity chromatog. The objectives were to investigate the effectiveness of the purified truncated polypeptides to induce protective immunity in **mice** challenged with **F. necrophorum**. The polypeptides, individually or in combination, and inactivated native leukotoxin or culture supernatant of **F. necrophorum** were homogenized with an adjuvant and injected into **mice** on days 0 and 21. Blood samples were collected to measure serum anti-leukotoxin antibody titers on days 0, 21 and 42 and on day 42, **mice** were exptl. challenged with **F. necrophorum**. All polypeptides were immunogenic, with GAS polypeptide eliciting the least antibody response. Two polypeptides (BSBSE and SH) induced significant protection in **mice** against **F. necrophorum** infection. Protection was better than the full-length native leukotoxin or inactivated supernatant. The study demonstrated that the leukotoxin of **F. necrophorum** carries epitopes that induce protective immunity against exptl. **fusobacterial infection**, thus providing further evidence to the importance of leukotoxin as a major virulence factor.
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 3 OF 16 USPATFULL on STN
ACCESSION NUMBER: 2002:105681 USPATFULL
TITLE: Recombinant **fusobacterium**

necrophorum leukotoxin vaccine and preparation thereof

INVENTOR(S): **Nagaraja, T.G.**, Manhattah, KS, UNITED STATES
Stewart, George C., Manhattan, KS, UNITED STATES
Narayanan, Sanjeev K., Irving, TX, UNITED STATES
Chengappa, M. M., Manhattan, KS, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002054883	A1	20020509
	US 6669940	B2	20031230
APPLICATION INFO.:	US 2001-841786	A1	20010424 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2000-558257, filed on 25 Apr 2000, PENDING
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HOVEY, WILLIAMS, TIMMONS & COLLINS, SUITE 400, 2405 GRAND BLVD., KANSAS CITY, MO, 64108
NUMBER OF CLAIMS: 45
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 12 Drawing Page(s)
LINE COUNT: 3541

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The **F. necrophorum** gene expressing leukotoxin was sequenced and cloned. The leukotoxin open reading frame (lktA) is part of a multi-gene operon containing 9,726 bp, and encoding a protein containing 3,241 amino acids with an overall molecular weight of 335,956 daltons. The protein encoded by the gene was truncated into five polypeptides having overlapping regions by truncating the full length gene into five different sections and amplifying, expressing, and recovering the protein encoded by each of these sections. Additionally, a region upstream of the gene was sequenced and the polypeptide encoded by that nucleotide sequence was purified and isolated. These polypeptides along with the full length protein are then tested to determine their immunogenicity and protective immunity in comparison to the efficacy of immunization conferred by inactivated native leukotoxin in **F. necrophorum** culture supernatant.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L48 ANSWER 4 OF 16 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 2002-049245 [06] WPIDS
DOC. NO. NON-CPI: N2002-036435
DOC. NO. CPI: C2002-013807

TITLE: **Fusobacterium necrophorum** polypeptide useful as vaccine in immunizing an animal against an **infection** e.g. foot rot, or liver abscesses caused by the bacterium.

DERWENT CLASS: B04 C06 D16 S03

INVENTOR(S): **CHENGAPPA, M M; NAGARAJA, T G; NARAYANAN, S K; STEWART, G C**
PATENT ASSIGNEE(S): (UNIV) UNIV KANSAS STATE RES FOUND; (CHEN-I) CHENGAPPA M M; (NAGA-I) NAGARAJA T G; (NARA-I) NARAYANAN S K; (STEW-I) STEWART G C; (UNIV) UNIV

KANSAS RES FOUND
COUNTRY COUNT: 96
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001080886	A2	20011101	(200206)*	EN	108
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
AU 2001059138	A	20011107	(200219)		
US 2002054883	A1	20020509	(200235)		
EP 1283717	A1	20030219	(200321)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
US 6669940	B2	20031230	(200402)		
MX 2002010418	A1	20030401	(200415)		
US 2004047871	A1	20040311	(200419)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001080886	A2	WO 2001-US13240	20010425
AU 2001059138	A	AU 2001-59138	20010425
US 2002054883	A1 CIP of	US 2000-558257	20000425
		US 2001-841786	20010424
EP 1283717	A1	EP 2001-932626	20010425
		WO 2001-US13240	20010425
US 6669940	B2 CIP of	US 2000-558257	20000425
		US 2001-841786	20010424
MX 2002010418	A1	WO 2001-US13240	20010425
		MX 2002-10418	20021022
US 2004047871	A1 CIP of	US 2000-558257	20000425
	Div ex	US 2001-841786	20010424
		US 2003-647057	20030822

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2001059138	A Based on	WO 2001080886
EP 1283717	A1 Based on	WO 2001080886
MX 2002010418	A1 Based on	WO 2001080886
US 2004047871	A1 Div ex	US 6669940

PRIORITY APPLN. INFO: US 2001-841786 20010424; US 2000-558257 20000425; US 2003-647057 20030822

AN 2002-049245 [06] WPIDS

AB WO 200180886 A UPAB: 20020128
NOVELTY - An isolated **Fusobacterium necrophorum** polypeptide (I) having an amino acid sequence having at least 50% sequence homology with a sequence (S1) of 369 (BSBSE), 927 (SX), 580 (GAS), 628 (SH), 773 (FINAL) or 338 (UPS) amino acids defined in the specification, is new.

Searcher : Shears 571-272-2528

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) an isolated polynucleotide (II) having a nucleotide sequence having at least 50% sequence homology with a sequence (S2) of 9726, 1130, 2780, 2141, 1887, 2322 or 1017 bp defined in the specification;

(2) an expression vector containing (II);

(3) a vaccine (III) comprising (I);

(4) a recombinantly derived polypeptide (IV) having sequence (S3) of 3241 amino acids defined in the specification or (S1);

(5) an isolated polypeptide (Im) which differs from (I) due to mutation event such as point mutations, deletions, insertions and rearrangements;

(6) an isolated polynucleotide (IIm) which differs from (II) due to mutation event such as point mutations, deletions, insertions and rearrangements;

(7) preparing (M1) a vaccine which confers effective immunity against infection caused by **F. necrophorum**, by providing **F. necrophorum** gene which expresses leukotoxin, expressing and recovering leukotoxin and combining the inactivated leukotoxin with a suitable carrier to produce the vaccine;

(8) a recombinant polypeptide (Ir1) which is recognized by anti-native leukotoxin antibodies in a western blot analysis;

(9) a recombinant polypeptide (Ir2) whose antisera neutralizes activity of native leukotoxin against bovine polymorphonuclear leukocytes, having 50% sequence homology with (S3), or (S1) having a sequence of 369 or 580 amino acids; and

(10) a recombinantly derived polypeptide (Ir3) sequence effective in conferring protective immunity against **F. necrophorum** in animals, where the sequence has 50% sequence identity to 1130 or 1887 bp as given in the specification.

ACTIVITY - Bactericide.

MECHANISM OF ACTION - Vaccine (claimed).

100 8-10 week old **mice**, were randomly divided into 10 groups of 10 **mice** each. The groups received five truncated leukotoxin polypeptides (BSBSE, SX, GAS, SH, and FINAL) individually, a mixture of BSBSE and GAS, admixture of all five truncated polypeptides, affinity purified native leukotoxin, inactivated culture supernatant, or PBS emulsified with Ribi adjuvant. Each **mouse** was injected subcutaneously on day 1 and day 21 with 200 mu l of one of the above preparations. The total amount of antigen in each injection was 10 mu g per animal.

Inactivated culture supernatant was used without dilution to reconstitute Ribi adjuvant and each **mouse** was injected with 200 mu l of the emulsified preparation. Negative control group received 200 mu l of PBS emulsified with the Ribi adjuvant. The serum samples were analyzed for leukotoxin neutralizing antibody by ELISA. The results showed that antibodies (Ab) specific to (I) was raised in the **mice** vaccinated with various leukotoxin polypeptides and no Abs in the control group.

USE - (M1) is useful for preparing a vaccine (V) which confers effective immunity against infection caused by **F. necrophorum**. (III) comprising (I) is useful for immunizing an animal against liver abscesses caused by **F. necrophorum** and for preventing foot rot caused by **F. necrophorum** infection (claimed).

Dwg.0/11

L48 ANSWER 5 OF 16 USPATFULL on STN
ACCESSION NUMBER: 1999:7150 USPATFULL

TITLE: Multivalent inocula for lessening incidence of liver abscesses in cattle

INVENTOR(S): **Nagaraja, Tiruvoor G.**, Manhattan, KS, United States
Chengappa, Muckatira M., Manhattan, KS, United States

PATENT ASSIGNEE(S): Kansas State University Research Foundation, Manhattan, KS, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5861162		19990119	
APPLICATION INFO.:	US 1995-483382		19950607	(8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Leary, Louise N.
LEGAL REPRESENTATIVE: Hovey, Williams, Timmons & Collins
NUMBER OF CLAIMS: 2
EXEMPLARY CLAIM: 1
LINE COUNT: 473

AB Novel inocula for administration to ruminant animals such as cattle or sheep are provided in order to immunize the animals and lessen the incidence of liver abscesses and/or foot rot therein. In one aspect, the invention pertains to an A. pyogenes-derived vaccine including an inactivated cell culture product (e.g., cell-elaborated supernatant) from A. pyogenes cell culture in a suitable carrier. In another aspect, the invention relates to a multivalent vaccine including at least first and second bacterial components in a carrier; the first component comprises an inactivated cell culture product of A. pyogenes whereas the second component comprises an inactivated cell culture product of **F. necrophorum** . The inocula of the present invention find particular utility in incidences where ruminant animals are particularly subject to A. pyogenes infection leading to liver abscesses and/or foot rot, e.g., where the animals are regularly treated with an antibiotic or where cattle are fed a high grain content concentrate diet.

L48 ANSWER 6 OF 16 USPATFULL on STN
ACCESSION NUMBER: 96:14596 USPATFULL
TITLE: Fusobacterium leukotoxoid vaccine

INVENTOR(S): **Nagaraja, Tiruvoor G.**, Manhattan, KS, United States
Chengappa, Muckatira M., Manhattan, KS, United States

PATENT ASSIGNEE(S): Kansas State University Research Foundation, Manhattan, KS, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5492694		19960220	
APPLICATION INFO.:	US 1994-333767		19941103	(8)

RELATED APPLN. INFO.: Division of Ser. No. US 1993-78066, filed on 18 Jun 1993 which is a continuation-in-part of Ser. No. US 1992-905041, filed on 26 Jun 1992, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Lilling, Herbert J.
LEGAL REPRESENTATIVE: Hovey, Williams, Timmons & Collins

NUMBER OF CLAIMS: 24
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 7 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 1074
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method is provided for the enhanced elaboration of leukotoxin from **F. necrophorum**, and subsequent production of an inactivated leukotoxoid ruminant animal vaccine against **F. necrophorum** infection and consequent liver abscesses and/or foot rot in such animals. The method involves forming a culture of **F. necrophorum** bacteria in growth media, allowing the bacteria to grow therein and to simultaneously elaborate leukotoxin in a supernate; the culturing is preferably carried out at a temperature of from about 35°-41° C., a pH of from about 6.5-8, and for a period of from about 4-9 hours. At the end of the culturing, bacterial growth and leukotoxin elaboration are terminated, preferably by separating the leukotoxin supernate, whereupon the vaccine is produced by inactivation of at least the supernate.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L48 ANSWER 7 OF 16 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 1996:844731 SCISEARCH
THE GENUINE ARTICLE: VU190
TITLE: The serum neutralizing antibody response in cattle to **Fusobacterium necrophorum** leukotoxoid and possible protection against experimentally induced hepatic abscesses
AUTHOR: Saginala S (Reprint); **Nagaraja T G**; Tan Z L; Lechtenberg K F; **Chengappa M M**; Hine P M
CORPORATE SOURCE: KANSAS STATE UNIV, DEPT ANIM SCI, MANHATTAN, KS 66506; KANSAS STATE UNIV, DEPT DIAGNOST MED PATHOBIOL, MANHATTAN, KS 66506; MIDWEST VET SCI INC, OAKLAND, NE; MALLINCKRODT VET INC, MUNDELEIN, IL
COUNTRY OF AUTHOR: USA
SOURCE: VETERINARY RESEARCH COMMUNICATIONS, (DEC 1996) Vol. 20, No. 6, pp. 493-504.
ISSN: 0165-7380.
PUBLISHER: KLUWER ACADEMIC PUBL, SPUIBOULEVARD 50, PO BOX 17, 3300 AA DORDRECHT, NETHERLANDS.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: AGRI
LANGUAGE: English
REFERENCE COUNT: 31
ENTRY DATE: Entered STN: 1996
Last Updated on STN: 1996
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The serum antileukotoxin antibody response and protection against subsequent experimental challenge with **Fusobacterium necrophorum** were investigated in 30 steers vaccinated with crude **F. necrophorum** leukotoxoid. Culture supernatant of **F. necrophorum**, strain 25, containing leukotoxoid was concentrated. The steers were assigned randomly to six groups (n=5): PBS control with Stimulon adjuvant; vaccinated with concentrated supernatant diluted to provide 2.5, 5.0, 10.0, or 20.0 ml with the water-soluble Stimulon adjuvant; and 5.0 ml with the Ribi oil-emulsion adjuvant. The steers were injected

subcutaneously on days 0 and 21. Blood samples were collected at weekly intervals to monitor serum antileukotoxin antibody titres. On day 42, all the steers were challenged intraportally with **F. necrophorum** culture. Three weeks later (day 63), the steers were killed and necropsied for examination of their livers and assessment of protection. Steers vaccinated with crude leukotoxoid tended to have higher antileukotoxin titres than the controls, but the difference was not significant. Also, the antibody titre did not appear to be dose-dependent. In the control group, 3 out of 5 steers developed liver abscesses. The incidence of liver abscesses in steers vaccinated with Stimulon adjuvant was not dose related; however, only 8 of the 25 vaccinated steers developed abscesses. None of the steers vaccinated with the 5.0 mi dose with Ribi had any abscesses. Evidence for a relationship between antileukotoxin antibody and protection was shown by the lower titre in those steers that developed abscesses compared to those that did not. It was concluded that antileukotoxin antibody titres probably provided some degree of protection against experimentally induced liver abscesses, but further dose-titration studies using Ribi or possibly another more effective adjuvant will be needed to confirm this.

L48 ANSWER 8 OF 16 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 1996:279164 SCISEARCH
THE GENUINE ARTICLE: UD947
TITLE: Serum neutralizing antibody response and protection against experimentally induced liver abscesses in steers vaccinated with **Fusobacterium necrophorum**
AUTHOR: Saginala S (Reprint); **Nagaraja T G**; Tan Z L; Lechtenberg K F; **Chengappa M M**; Kemp K E; Hine P M
CORPORATE SOURCE: KANSAS STATE UNIV, DEPT ANIM SCI, MANHATTAN, KS 66506; KANSAS STATE UNIV, DEPT DIAGNOST MED PATHOL & MICROBIOL, MANHATTAN, KS 66506; KANSAS STATE UNIV, DEPT STAT, MANHATTAN, KS 66506; MIDWEST VET SERV INC, OAKLAND, NE 68045; MALLINCKRODT VET INC, MUNDELEIN, IL 60060
COUNTRY OF AUTHOR: USA
SOURCE: AMERICAN JOURNAL OF VETERINARY RESEARCH, (APR 1996) Vol. 57, No. 4, pp. 483-488. ISSN: 0002-9645.
PUBLISHER: AMER VETERINARY MEDICAL ASSOC, 1931 N MEACHAM RD SUITE 100, SCHAUMBURG, IL 60173-4360.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: AGRI
LANGUAGE: English
REFERENCE COUNT: 39
ENTRY DATE: Entered STN: 1996
Last Updated on STN: 1996

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Objective-To determine the efficacy of leukotoxin-based **Fusobacterium necrophorum** vaccines and dietary tylosin in providing protection against experimentally induced hepatic abscesses in steers.

Design-30 steers assigned randomly to 6 treatment groups of 5 steers each: 1, phosphate-buffered saline solution (PBSS; control); 2, PBSS control, fed tylosin (100 mg/steer) daily; 3, inactivated whole-cell culture with oil emulsion adjuvant; 4, culture supernatant

(crude toxoid) with oil emulsion adjuvant; 5, semipurified leukotoxoid with oil emulsion adjuvant; and 6, semipurified leukotoxoid with saponin adjuvant.

Procedure-Steers were inoculated SC with emulsified antigen Or PBSS on days 0 and 21. Blood samples were collected at weekly intervals to monitor serum antileukotoxin antibody titer. On day 42, all steers were challenge exposed intraportally with **F necrophorum** culture. Three weeks later (day 63), steers were euthanatized and necropsied to examine liver and assess protection.

Results-Antileukotoxin antibody titers of all vaccinated groups markedly increased from baseline values, and mean titers of vaccinated groups were higher than those of the control and tylosin-treated groups. Steers vaccinated with culture supernatant with oil emulsion adjuvant or semipurified leukotoxoid with saponin adjuvant had the highest mean antibody titers. All 5 steers in the control group developed liver abscesses. Tylosin feeding did not protect steers challenge exposed with **F necrophorum** intraportally.

Conclusions-Culture supernatant was more protective than whole-cell culture or semipurified leukotoxin against experimentally induced hepatic abscesses. Partial purification of leukotoxin appeared to reduce its protective immunity.

L48 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2

ACCESSION NUMBER: 1996:88465 CAPLUS
DOCUMENT NUMBER: 124:136965
TITLE: Ribotyping to differentiate **Fusobacterium necrophorum** subsp. necrophorum and **F. necrophorum** subsp. funduliforme isolated from bovine ruminal contents and liver abscesses
AUTHOR(S): Okwumabua, Ogi; Tan, Zilong; Staats, Jacque; Oberst, R. D.; **Chengappa, M. M.**; **Nagaraja, T. G.**
CORPORATE SOURCE: Dep. Diagnostic Med./Pathology, Kansas State Univ., Manhattan, KS, 66506, USA
SOURCE: Applied and Environmental Microbiology (1996), 62(2), 469-72
CODEN: AEMIDF; ISSN: 0099-2240
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Differences in biol. activities (hemagglutination, hemolytic, leukotoxic, and virulence) and ribotypes between the two subspecies of **Fusobacterium necrophorum** of bovine ruminal and liver abscess origins were investigated. Hemagglutination activity was present in all hepatic, but only some ruminal, strains of **Fusobacterium necrophorum** subsp. necrophorum. Ruminal **F. necrophorum** subsp. necrophorum had low leukotoxin titers yet was virulent in **mice**. **Fusobacterium necrophorum** subsp. funduliforme of hepatic or ruminal origin had no hemagglutination activity, had low hemolytic and leukotoxic activities, and was less virulent to **mice**. For ribotyping, chromosomal DNAs of 10 **F. necrophorum** subsp. necrophorum and 11 **F. necrophorum** subsp. funduliforme isolates were digested with restriction endonucleases (EcoRI, EcoRV, SalI, PstI, and HaeIII) and examined by restriction fragment length polymorphisms after hybridizing with a digoxigenin-labeled cDNA probe transcribed from a mixture of 16

and 23S rRNAs from Escherichia coli. The most discriminating restriction endonuclease enzyme for ribotyping was EcoRI. The presence or absence of two distinct bands of 2.6 and 4.3 kb differentiated the two subspecies. Regardless of the origin, only **F. necrophorum** subsp. necrophorum, a virulent subspecies, had a ca. 2.6-kb band, whereas **F. necrophorum** subsp. funduliforme, a less virulent subspecies, had a ca. 4.3-kb band. Ribotyping appears to be a useful technique to genetically differentiate the two subspecies of **F. necrophorum.**

L48 ANSWER 10 OF 16 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 1996:793965 SCISEARCH
THE GENUINE ARTICLE: VP867
TITLE: Liver abscesses in feedlot cattle .2. Incidence, economic importance, and prevention.
AUTHOR: **Nagaraja T G (Reprint)**; Laudert S B; Parrott J C
CORPORATE SOURCE: KANSAS STATE UNIV, COLL VET MED, DEPT ANIM SCI, MANHATTAN, KS 66506 (Reprint); LILLY RES LABS, GARDEN CITY, KS; LILLY RES LABS, COUNCIL BLUFFS, IA
COUNTRY OF AUTHOR: USA
SOURCE: COMPENDIUM ON CONTINUING EDUCATION FOR THE PRACTICING VETERINARIAN, (OCT 1996) Vol. 18, No. 10, Supp. [S], pp. S264-&.
ISSN: 0193-1903.
PUBLISHER: VETERINARY LEARNING SYSTEMS, 425 PHILLIPS BLVD #100, TRENTON, NJ 08618.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: AGRI
LANGUAGE: English
REFERENCE COUNT: 60
ENTRY DATE: Entered STN: 1996
Last Updated on STN: 1996

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB In beef cattle, liver abscesses result from aggressive grain-feeding programs. The abscesses detected only at slaughter, and cattle seldom exhibit clinical signs. Liver abscesses are an economic liability to the produces, the packer, and the consumer of beef. In addition to liver condemnation, the economic impact involves reduced feed intake, reduced weight gain, decreased feed efficiency, and decreased carcass yield. **Fusobacterium necrophorum** is the primary causative agent; Actinomyces pyogenes is the second most frequently isolated pathogen. Ruminal ions resulting from acidosis are believed to be the predisposing factors for liver abscess. The control of liver abscesses in feedlot cattle usually depends on the use of antimicrobial compounds. Five antibiotics (bacitracin, chlortetracycline, oxytetracycline, tylosin, and virginiamycin) are approved for use in preventing liver abscesses in feedlot cattle. Tylosin is the most commonly used and the most effective feed additive.

L48 ANSWER 11 OF 16 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 1996:709493 SCISEARCH
THE GENUINE ARTICLE: VK086
TITLE: Liver abscesses in feedlot cattle .1. Causes, pathogenesis, pathology, and diagnosis

AUTHOR: **Nagaraja T G (Reprint)**; Laudert S B; Parrott J C
CORPORATE SOURCE: KANSAS STATE UNIV, COLL VET MED, DEPT ANIM SCI, MANHATTAN, KS 66506 (Reprint); LILLY RES LABS, GARDEN CITY, KS; LILLY RES LABS, COUNCIL BLUFFS, IA
COUNTRY OF AUTHOR: USA
SOURCE: COMPENDIUM ON CONTINUING EDUCATION FOR THE PRACTICING VETERINARIAN, (SEP 1996) Vol. 18, No. 9, Supp. [S], pp. S230-&.
ISSN: 0193-1903.
PUBLISHER: VETERINARY LEARNING SYSTEMS, 425 PHILLIPS BLVD #100, TRENTON, NJ 08618.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: AGRI
LANGUAGE: English
REFERENCE COUNT: 69
ENTRY DATE: Entered STN: 1996
Last Updated on STN: 1996
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Liver abscesses result from the entry and establishment of pyogenic bacteria. Bacteria gain access to the liver via direct extension or via the portal vein, hepatic artery, umbilical vein, or bile duct system. Direct extension of infection from adjacent tissues and organs is usually of traumatic origin. Entry via the portal vein is by far the most frequent because of its large volume of blood flow and the fact that it drains the gastrointestinal tract. Liver abscesses can occur in cattle of all ages and types (including dairy cows); the abscesses of greatest economic significance occur in grain-fed cattle. The condition is reported most commonly in intensively feed beef cattle.

L48 ANSWER 12 OF 16 USPATFULL on STN
ACCESSION NUMBER: 95:88252 USPATFULL
TITLE: **Fusobacterium necrophorum** leukotoxoid vaccine
INVENTOR(S): **Nagaraja, Tiruvoor G.**, Manhattan, KS, United States
Chengappa, Muckatira M., Manhattan, KS, United States
PATENT ASSIGNEE(S): Kansas State University Research Foundation, Manhattan, KS, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5455034		19951003
APPLICATION INFO.:	US 1993-78066		19930618 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1992-905041, filed on 26 Jun 1992, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Lilling, Herbert J.
LEGAL REPRESENTATIVE: Hovey, Williams, Timmons & Collins
NUMBER OF CLAIMS: 3
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 7 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 1031
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method is provided for the enhanced elaboration of leukotoxin from **F. necrophorum**, and subsequent production of an

inactivated leukotoxoid ruminant animal vaccine against **F. necrophorum** infection and consequent liver abscesses and/or foot rot in such animals. The method involves forming a culture of **F. necrophorum** bacteria in growth media, allowing the bacteria to grow therein and to simultaneously elaborate leukotoxin in a supernate; the culturing is preferably carried out at a temperature of from about 35°-41° C., a pH of from about 6.5-8, and for a period of from about 4-9 hours. At the end oil of the culturing, bacterial growth and leukotoxin elaboration are terminated, preferably by separating the leukotoxin supernate, whereupon the vaccine is produced by inactivation of at least the supernate.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L48 ANSWER 13 OF 16 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 1994:227261 BIOSIS
DOCUMENT NUMBER: PREV199497240261
TITLE: Biological and biochemical characterization of **Fusobacterium necrophorum** leukotoxin.
AUTHOR(S): Tan, Z. L.; **Nagaraja, T. G.** [Reprint author]; **Chengappa, M. M.**; Smith, J. S.
CORPORATE SOURCE: Dep. Animal Sci. Industry, Kansas State Univ., Manhattan, KS 66506, USA
SOURCE: American Journal of Veterinary Research, (1994) Vol. 55, No. 4, pp. 515-521.
CODEN: AJVRAH. ISSN: 0002-9645.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 24 May 1994
Last Updated on STN: 25 May 1994

AB Biological and biochemical characteristics of the leukotoxin of **Fusobacterium necrophorum** were determined. Culture supernatant of **F necrophorum** was toxic to polymorphonuclear neutrophilic leukocytes from cattle and sheep, but not to those from pigs and rabbits. Culture supernatant and sonicated bacterial cell fractions had low hemolytic activity and did not cause dermonecrosis in a guinea pig, Supernatant-derived leukotoxin was inactivated at 56 C for 5 minutes and became unstable at pH gt 7.8 or lt 6.6. Chemical treatment with 0.1% sodium dodecyl sulfate, 0.25% sodium deoxycholate, 5.2% sodium sulfide, or 0.25 mM titanium (III) citrate markedly decreased leukotoxicity. Enzymatic treatment with protease, trypsin, and chymotrypsin inactivated the toxin completely, whereas amylase had no effect. Use of protease inhibitors failed to prevent loss of leukotoxin activity. Using membrane partition chromatography and gel filtration, the estimated molecular weight of the toxin was gt 300,000. On reduction and denaturation, the toxin dissociated into several components by use of sodium dodecyl sulfate-polyacrylamide gel electrophoresis.

L48 ANSWER 14 OF 16 MEDLINE on STN

ACCESSION NUMBER: 95193218 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7886927
TITLE: Purification and quantification of **Fusobacterium necrophorum** leukotoxin by using monoclonal antibodies.
AUTHOR: Tan Z L; **Nagaraja T G; Chengappa M M** ; Staats J J

Searcher : Shears 571-272-2528

CORPORATE SOURCE: Department of Pathology and Microbiology, College of Veterinary Medicine, Kansas State University, Manhattan.
SOURCE: Veterinary microbiology, (1994 Nov) 42 (2-3) 121-33. Journal code: 7705469. ISSN: 0378-1135.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199504
ENTRY DATE: Entered STN: 19950425
Last Updated on STN: 19950425
Entered Medline: 19950407

AB Monoclonal antibodies (Mabs) were produced to the leukotoxin of **Fusobacterium necrophorum**. Two mAbs (F7B10 and E12E9) partially neutralized leukotoxin activity, as determined by a tetrazolium (MTT)-dye reduction assay with bovine polymorphonuclear neutrophils as target cells. Immunoblot analysis showed that both clones reacted with antigens of 110 and 131 kilodaltons. Epitope analysis showed that the two mAbs recognized the same epitope. An affinity column containing immobilized mAb F7B10 was used to purify leukotoxin from crude toxin. Affinity chromatography of 1 ml of culture supernatant resulted in 0.67 microgram or 1350 units of leukotoxin. Leukotoxin was quantitated by a sandwich enzyme-linked immunosorbent assay using mAb F7B10 as the capture antibody and as the biotinylated indicator. The minimal detectable level was approximately 1 ng, corresponding to 2 leukotoxin units in the sample.

L48 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3
ACCESSION NUMBER: 1994:478175 CAPLUS
DOCUMENT NUMBER: 121:78175
TITLE: Biochemical and biological characterization of ruminal **Fusobacterium necrophorum**
AUTHOR(S): Tan, Z. L.; **Nagaraja, T. G.**; **Chengappa, M. M.**
CORPORATE SOURCE: Department of Pathology and Microbiology and, Manhattan, KS, 66506, USA
SOURCE: FEMS Microbiology Letters (1994), 120(1-2), 81-6
CODEN: FMLED7; ISSN: 0378-1097
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Biochem. characteristics, biol. activities, and antimicrobial susceptibilities of ruminal **Fusobacterium necrophorum** (eight subsp. necrophorum and eight subsp. funduliforme) and of isolates (three of each subsp.) obtained from bovine hepatic abscesses were determined **F. necrophorum** subsp. necrophorum strains had higher phosphatase and DNase activities, produced more leukotoxin, and were more pathogenic to **mice** than subsp. funduliforme strains. The leukotoxin titer for culture supernatants of ruminal subsp. necrophorum strains was approx. 15 times lower than that of hepatic subsp. necrophorum strains. Hemagglutination activity was present in all hepatic, but only in some ruminal, strains of subsp. necrophorum. The antimicrobial sensitivity profile of the ruminal isolates was similar to that of hepatic isolates.

L48 ANSWER 16 OF 16 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 1991:314815 SCISEARCH
THE GENUINE ARTICLE: FN212
TITLE: HEPATIC ULTRASONOGRAPHY AND BLOOD CHANGES IN CATTLE WITH EXPERIMENTALLY INDUCED HEPATIC-ABSCESSES
AUTHOR: LECHTENBERG K F (Reprint); **NAGARAJA T G**
CORPORATE SOURCE: KANSAS STATE UNIV AGR & APPL SCI, DEPT ANIM SCI & IND, MANHATTAN, KS 66506
COUNTRY OF AUTHOR: USA
SOURCE: AMERICAN JOURNAL OF VETERINARY RESEARCH, (JUN 1991) Vol. 52, No. 6, pp. 803-809.
ISSN: 0002-9645.
PUBLISHER: AMER VETERINARY MEDICAL ASSOC, 1931 N MEACHAM RD SUITE 100, SCHAUMBURG, IL 60173-4360.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: AGRI
LANGUAGE: English
REFERENCE COUNT: 38
ENTRY DATE: Entered STN: 1994
Last Updated on STN: 1994
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Hepatic abscesses were induced experimentally in 5 steers by inoculating **Fusobacterium necrophorum** via ultrasonography-guided, percutaneous catheterization of the portal vein. Hepatic ultrasonography was performed to determine the onset and progression of abscessation. Blood samples were collected before and after inoculation for performing leukocyte counts and hepatic function tests. Ultrasonographic evidence of liver abscesses was observed as early as 3 days after inoculation. Abscesses appeared as hyperechoic centers (cellular debris and pus) surrounded by hypoechoic or anechoic areas (fluid). Increases in rectal temperature, leukocyte counts, fibrinogen, globulin, bilirubin, gamma-glutamyltransferase, and sorbitol dehydrogenase concentrations were detected. Hepatic dysfunction was evidenced by decrease in serum albumin concentration and low sulfobromophthalein clearance. The ultrasonographic diagnosis of abscesses correlated well with necropsy findings.

FILE 'HOME' ENTERED AT 16:17:12 ON 08 DEC 2005

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     (FILE 'HOME' ENTERED AT 15:40:21 ON 08 DEC 2005)
               SET COST OFF

     FILE 'CAPLUS' ENTERED AT 15:40:30 ON 08 DEC 2005
L1           294 SEA ABB=ON  PLU=ON  (FUSOBACTER? OR F OR SPHAEROPH? OR
                 S)(W)NECROPHOR?
L2            41 SEA ABB=ON  PLU=ON  L1 AND (MICE OR MOUSE OR RODENT OR
                 RAT)
L3             5 SEA ABB=ON  PLU=ON  L2 AND (POLYPEPTIDE OR PEPTIDE OR
                 PROTEIN OR POLYPROTEIN)
L*** DEL       1 S L3 AND NAGARAJA ?/AU
                 D TI AU
                 D KWIC

     FILE 'CAPLUS' ENTERED AT 15:43:47 ON 08 DEC 2005
               D QUE L3
               D L3 1-5 .BEVERLY

     FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH,
     JICST-EPLUS, JAPIO, VETU, VETB' ENTERED AT 15:43:47 ON 08 DEC 2005
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L5            21 DUP REM L4 (16 DUPLICATES REMOVED)
                 D 1-21 IBIB ABS

     FILE 'CAPLUS' ENTERED AT 15:45:36 ON 08 DEC 2005
L6             0 SEA ABB=ON  PLU=ON  L1 AND (MUS OR M)(W)(DOMESTIC? OR
                 MUSCULUS)

     FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH,
     JICST-EPLUS, JAPIO, VETU, VETB' ENTERED AT 15:49:33 ON 08 DEC 2005
L7             0 SEA ABB=ON  PLU=ON  L6

     FILE 'CAPLUS' ENTERED AT 15:51:18 ON 08 DEC 2005
L8           154 SEA ABB=ON  PLU=ON  (FUSOBACTER? OR SPHAEROPHOR?)(S)INFECTI
                 ON OR NECROBACILLOSIS
L9            39 SEA ABB=ON  PLU=ON  L8 AND ((MUS OR M)(W)(DOMESTIC? OR
                 MUSCULUS) OR MICE OR MOUSE OR RAT OR RODENT)
L10            3 SEA ABB=ON  PLU=ON  L9 AND (POLYPEPTIDE OR PEPTIDE OR
                 PROTEIN OR POLYPROTEIN)
                 D QUE
L11            2 SEA ABB=ON  PLU=ON  L10 NOT L3
                 D 1-2 .BEVERLY
L*** DEL       1 S L10 NOT L11
                 D TI AU

     FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH,
     JICST-EPLUS, JAPIO, VETU, VETB' ENTERED AT 15:58:00 ON 08 DEC 2005
L12           20 SEA ABB=ON  PLU=ON  L10
L13           12 SEA ABB=ON  PLU=ON  L12 NOT L4
L14            9 DUP REM L13 (3 DUPLICATES REMOVED)
                 D 1-9 IBIB ABS

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L15          300 SEA ABB=ON  PLU=ON  (L1 OR L8)(L)((MUS OR M)(W)(DOMESTIC?
                 OR MUSCULUS) OR MICE OR MOUSE OR RAT OR RODENT)
L16          195 SEA ABB=ON  PLU=ON  L15(L)(POLYPEPTIDE OR PEPTIDE OR
                 PROTEIN OR POLYPROTEIN)
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L*** DEL     105 S L16(L)(NUCLEOTIDE OR NUCLEIC)
L17          116 SEA ABB=ON  PLU=ON  L16(L)(NUCLEOTIDE OR NUCLEIC OR DNA OR
                 DEOXYRIBONUCLEIC OR DEOXY RIBONUCLEIC)
L18          101 SEA ABB=ON  PLU=ON  L17(L)RECOMBINANT?
L19           25 SEA ABB=ON  PLU=ON  L18(L)(PROTECTIVE IMMUN? OR IMMUNOPROTE
                 CT?)
                 D KWIC
L*** DEL     368 S HIA
L20           88 SEA ABB=ON  PLU=ON  L16(L)((NUCLEOTIDE OR NUCLEIC OR DNA
                 OR DEOXYRIBONUCLEIC OR DEOXY RIBONUCLEIC)(S)RECOMBINANT?)
L*** DEL    1212 S IMMUNOPROTECT?
                 D KWIC
L21           61 SEA ABB=ON  PLU=ON  L20(L)(PROTECTIVE(3A)IMMUN? OR
                 IMMUNOPROTECT? OR IMMUNOGEN? OR IMMUNOSTIMUL? OR IMMUN?
                 STIMUL?)
L*** DEL      61 S L21(L)RECOMBINANT?
                 D QUE
L22           41 SEA ABB=ON  PLU=ON  (L1 OR L8)(S)((MUS OR M)(W)(DOMESTIC?
                 OR MUSCULUS) OR MICE OR MOUSE OR RAT OR RODENT)
L23            6 SEA ABB=ON  PLU=ON  L22(S)(POLYPEPTIDE OR PEPTIDE OR
                 PROTEIN OR POLYPROTEIN)
                 D QUE
L24           30 SEA ABB=ON  PLU=ON  L22(L)(POLYPEPTIDE OR PEPTIDE OR
                 PROTEIN OR POLYPROTEIN)
L25           26 SEA ABB=ON  PLU=ON  L24(L)((NUCLEOTIDE OR NUCLEIC OR DNA
                 OR DEOXYRIBONUCLEIC OR DEOXY RIBONUCLEIC)(S)RECOMBINANT?)
                 D QUE
                 D 1-25 IBIB ABS

     FILE 'MEDLINE' ENTERED AT 16:06:19 ON 08 DEC 2005
                 E FUSOBACTERIUM INFECTION/CT 5
L26          718 SEA ABB=ON  PLU=ON  "FUSOBACTERIUM INFECTION"/CT
                 E FUSOBACTERIA NECROPHORUM/CT 5
                 E FUSOBACTERIUM NECROPHORUM/CT 5
L27          455 SEA ABB=ON  PLU=ON  "FUSOBACTERIUM NECROPHORUM"/CT
                 E MICE/CT 5
L28       731600 SEA ABB=ON  PLU=ON  MICE/CT
                 E MOUSE/CT 5
                 E RODENTS/CT 5
                 E RODENT/CT 5
L29           78 SEA ABB=ON  PLU=ON  (L26 OR L27) AND L28
                 E PEPTIDES/CT 5
L30        83942 SEA ABB=ON  PLU=ON  PEPTIDES/CT
                 E PROTEINS/CT 5
L31       118149 SEA ABB=ON  PLU=ON  PROTEINS/CT
L32            0 SEA ABB=ON  PLU=ON  L29 AND (L30 OR L31)
                 E NUCLEOTIDES/CT 5
L33        12138 SEA ABB=ON  PLU=ON  NUCLEOTIDES/CT
                 E NUCLEIC ACIDS/CT 5
L34         5987 SEA ABB=ON  PLU=ON  "NUCLEIC ACIDS"/CT
L35            0 SEA ABB=ON  PLU=ON  L29 AND (L33 OR L34)
L36            2 SEA ABB=ON  PLU=ON  (L26 OR L27) AND (L30 OR L31)
L37            0 SEA ABB=ON  PLU=ON  (L26 OR L27) AND (L33 OR L34)
                 D QUE L32
                 D QUE L35
                 D QUE L36
                 D QUE L37
                 D L36 1-2 .BEVERLYMED
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Searcher : Shears 571-272-2528

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     FILE 'CAPLUS, MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH,
     JICST-EPLUS, JAPIO, USPATFULL' ENTERED AT 16:14:20 ON 08 DEC 2005
L38           686 SEA ABB=ON  PLU=ON  "NAGARAJA T"?/AU
L39          9577 SEA ABB=ON  PLU=ON  "STEWART G"?/AU
L40          2482 SEA ABB=ON  PLU=ON  "NARAYANAN S"?/AU
L41           467 SEA ABB=ON  PLU=ON  "CHENGAPPA M"?/AU
L42            37 SEA ABB=ON  PLU=ON  L38 AND L39 AND L40 AND L41
L43           143 SEA ABB=ON  PLU=ON  L38 AND (L39 OR L40 OR L41)
L44            51 SEA ABB=ON  PLU=ON  L39 AND (L40 OR L41)
L45            52 SEA ABB=ON  PLU=ON  L40 AND L41
L46           146 SEA ABB=ON  PLU=ON  (L42 OR L43 OR L44 OR L45 OR L38 OR
                  L39 OR L40 OR L41) AND (L1 OR L8)
L47            28 SEA ABB=ON  PLU=ON  L46 AND (MUSCULUS OR DOMESTICUS OR RAT
                  OR MOUSE OR MICE OR RODENT)
L48            16 DUP REM L47 (12 DUPLICATES REMOVED)
                  D 1-16 IBIB ABS

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     FILE HOME

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      The MEDLINE reload for 2005 is now available.  For details enter HELP
      RLOAD at an arrow promt (=>).  See also:

         http://www.nlm.nih.gov/mesh/
         http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

      OLDMEDLINE now back to 1950.

      MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
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FILE BIOSIS
FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 7 December 2005 (20051207/ED)

FILE EMBASE
FILE COVERS 1974 TO 1 Dec 2005 (20051201/ED)

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FILE LAST UPDATED: 5 DEC 2005 <20051205/UP>
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FILE SCISEARCH

FILE COVERS 1974 TO 1 Dec 2005 (20051201/ED)

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FILE COVERS 1985 TO 6 DEC 2005 (20051206/ED)

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FILE JAPIO
FILE LAST UPDATED: 7 DEC 2005 <20051207/UP>
FILE COVERS APR 1973 TO JULY 28, 2005

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FILE LAST UPDATED: 02 JAN 2002 <20020102/UP>
FILE COVERS 1983-2001

FILE VETB
FILE LAST UPDATED: 25 SEP 94 <940925/UP>
FILE COVERS 1968-1982

FILE USPATFULL
FILE COVERS 1971 TO PATENT PUBLICATION DATE: 8 Dec 2005 (20051208/PD)
FILE LAST UPDATED: 8 Dec 2005 (20051208/ED)
HIGHEST GRANTED PATENT NUMBER: US6973671
HIGHEST APPLICATION PUBLICATION NUMBER: US2005273898
CA INDEXING IS CURRENT THROUGH 8 Dec 2005 (20051208/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 8 Dec 2005 (20051208/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Oct 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Oct 2005

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